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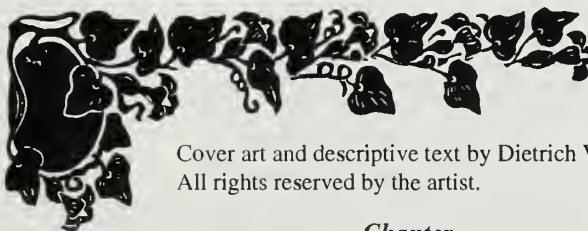
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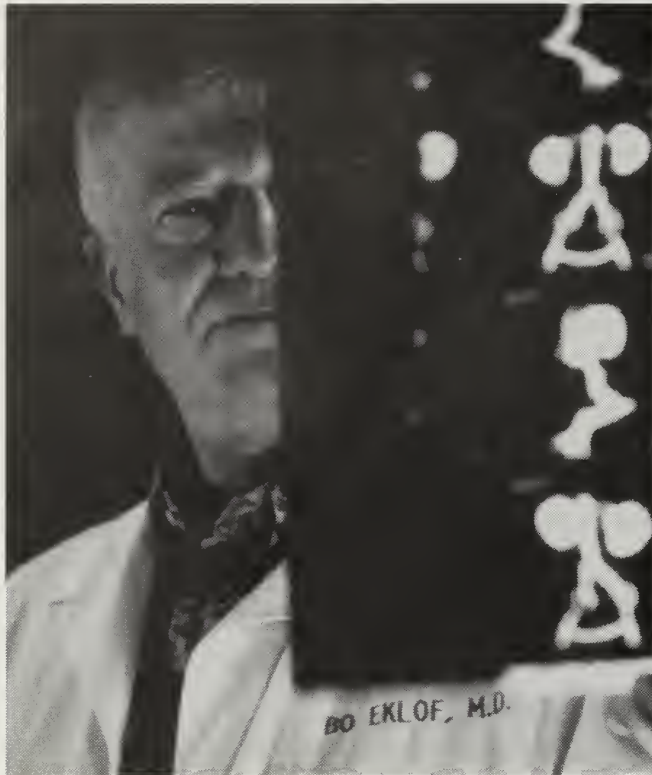


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Chanter

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Craig Thomas, MD & Susan Scott

January 9, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives –

At the conclusion, participants will be able to:

- Understand the latest first aid and medical treatments of Hawaii's jellyfish stings.
- Recognize and treat ciguatera and scombroid fish poisoning.
- Understand the incidence of drowning in Hawaii.

– Friday Noon Conference –

Luncheon

Spectrum of Utility of Oral Antifungal Agents:

Focus on Efficacy and Safety

James Q. Del Rosso, DO

January 23, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives –

At the conclusion, participants will be able to:

- Differentiate the clinical applications of oral antifungal agents.
- Describe the proper dosage regimens.
- Identify potential side effects and the appropriate patient monitoring.
- Recommendations for oral antifungal agents.

We would like to acknowledge the Educational Grant from JANSSEN Pharmaceuticals.

– Friday Noon Conference –

Luncheon

Current Trends in Alzheimer's Disease and Dementia

Gary W. Steinke, MD

January 30, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives –

At the conclusion, participants will be able to:

- Gain knowledge about current research as to the theory and treatment of Alzheimer's Disease.
- Understand the genetics of the dementia syndrome.
- Identify conditions that are necessary for the diagnosis of dementia of the Alzheimer's type.

We would like to acknowledge the Educational Grant from Pfizer Labs.

Please call Fran Smith at 522-4471 for more information.



D.A.D.D. Gains Momentum

Norman Goldstein MD
Editor

In this issue, we continue the series of A.A. "Bud" Smyser's Hawaii's World with his column on D.A.D.D. from the Honolulu Star-Bulletin.

The Governor's Blue-Ribbon Panel on Living and Dying with Dignity has been meeting for more than a year. Bud Smyser and I are members, as well as a broad base of community leaders. The Panel has also been conducting public hearings - town hall-type meetings where Hawaii's public has been invited to present written or verbal testimony on D.A.D.D.

While the majority of presenters favor Doctor Assisted Death with Dignity, the Blue Ribbon Panel may not be able to make definite recommendations on D.A.D.D. - similar to the Oregon program.

I strongly urge the Panel to recommend the Governor hold a referendum for Hawaii's voters. Let's hear from all the voters.

Members of the Governor's Blue-Ribbon Panel on Living & Dying with Dignity

Dr Naleen N. Andrade, Psychiatrist, Queen's Medical Center

Rabbi Stephan Barack, Temple Bet Shalom

Dr Max Botticelli, Retired Professor, University of Hawaii, School of Medicine

Mary Cooke, Community Volunteer

Jeffrey P. Crabtree, Attorney

The Reverend Beth Donaldson, Kapaa United Church of Christ

Sister Roselani Enomoto, CSJ, Director of the Roman Catholic Church Office for Social Ministry, Maui

The Reverence Yoshiaki Fujitani, Retired Bishop, Honpa Hongwanji Temple

Dr Norman Goldstein, Editor, Hawaii Medical Association Journal

Dr Lawrence Heintz, Professor of Humanities, University of Hawaii at Hilo

Dr Brian Issell, Director, Cancer Research Center of Hawaii, University of HI

Hideto Kono, Former Director, State Department of Planning and Economic Development, and Former President, Japan-America Institute of Management Sciences (JAIMS)

Patricia Lee, MSN, RN, CS, Gerontological Nurse Practitioner

Dr Lawrence Miike, Director of the State Department of Health

Stephani Monet, Esq., RN, Director of Education & Practice, Hawaii Nurses' Association

James Pietsch, Attorney, Director of the Elder Law Project, University of HI

A.A. "Bud" Smyser, Contributing Editor and Retired Editorial Page Editor, the Honolulu Star-Bulletin

Judge Betty Vitousek, Retired Judge, Family Court

The Case of the Month

In case you missed the Editorial in the November 1997 issue of the Journal, we are repeating it again now. It is so important!

Hawaii is in a very unique position geographically and medically

as well. A.A. "Bud" Smyser describes this eloquently in his Hawaii's World commentary published in the November 10, 1997 *Honolulu Star-Bulletin* and reprinted with permission on page 371.

It's Been Three Great Years

Entering the fourth year as Editor, I recall Harry Arnold Jr., MD saying "The Journal is a great deal of work for me, the many contributors and the staff." Harry was right again! But, because of the gratification received in publishing a peer-reviewed medical journal, everyone is pleased to be involved. We try to publish a variety of manuscripts to interest and educate our 1,800 readers.

Some special issues have become "textbooks"; others have been controversial. Death and Dying (December 1996 and March 1997) has already played a significant role here in Hawaii and in other states dealing with D.A.A.D.—Doctor Assisted Death with Dignity. [See letter from the National Hemlock Society on page 371.]

Our schedule of Special Issues for 1998 and 1999 is currently being finalized. Look for the "Pain" issues I and II in February and April. Clinical Toxicology and Hawaii Poison control are featured in March.

Thanks to our many Peer Reviewers, our Copy Editors: Dr Ann Catts, Dr Drake Will and Dr Al Morris; to our Editorial Board; to our hard-working Staff: Carol Uyeda and Becky Kendro; to our very competent Ad Representative, Michael Roth; and to our readers who have expressed thanks in person and in writing. Finally, a very special thank you to the staff of the Hawaii Medical Library for its many favors, including the preparation of our Index in the December issue.

Military Presence in Hawaii

The manuscripts in this issue of the Journal demonstrate the past and present role of military medicine in Hawaii. Scott A. Norton, MD, MPH, MSc was a Dermatologist at Tripler and an Assistant Professor of Medicine at our Medical School. He now serves as Chief of Dermatology at the RW Bliss Army Hospital, Fort Huachuca in Arizona. Scott was a very valuable contributing member of the Hawaii Dermatological Society. We miss him.

The excellent historic manuscript by Col. Thomas Cashman about William Gorgas and Yellow Fever was presented, in part, at a meeting of the Hawaii Society for the History of Medicine and Public Health. I first met Tom Cashman as a pediatrician, when I served as Chief of Dermatology at Tripler 30 years ago. Tom has traveled to many military assignments over the years but has returned to Tripler as Colonel in the Department of Preventive Medicine Service. Welcome home, Tom.

The third military manuscript in this issue is the first reported case of HTLV-1 associated Adult T-Cell Leukemia in a Micronesian patient from the Hematology - Oncology Service at Tripler. Mark Cummings, MD and his associates present an excellent first in our series of monthly case reports unique to the Pacific.

Mahalo nui loa to our medical associates in uniform. Hawaii and our country are proud to have you here.



Presidents Message

Leonard Howard MD

Your HMA leadership just returned from the interim AMA meeting in Dallas, TX. Our representation consisted of our two Delegates, Dr Cal Kam and Dr Allan Kunimoto, your Alternate Delegates, Dr Fred Holschuh and your President, and your President-Elect Dr Patricia Chinn. Dr Holschuh and I also attended the Organized Medical Staff Section meeting immediately preceding the AMA meeting. The issue on everyone's mind was "Sunbeam-gate." Many resolutions centered on this issue, and several special meetings were held to explain the issue, the corrective actions taken, and the continuing investigation by a special committee of the House of Delegates.

Another item stimulating a great deal of discussion was the American Medical Accreditation Program, or AMAP. This is a physician certification program that is intended to make credential verification for various medical entities easier for the physician. Once the physician has been certified by AMAP, this will represent evidence that can be used in all cases where credential verification is required. Ideally, instead of having to repeatedly fill out one form for each organization, the AMAP accreditation form could be submitted. Unfortunately, the AMA staff presented the program to various states in a somewhat

heavy handed manner, giving the impression that no consideration would be given to states that already had a Credential Verification program in place. In addition there were some problems with communication between AMA staff and various state medical organizations. These problems were presented in several forums and the upshot was that the leaders of the AMAP program got the message from the grassroots, and the approach will be changed. We will be meeting with AMAP leaders in the spring to discuss how Hawaii might adapt the program to our specific needs.

The AMA Division of Representation has identified four priorities for 1997-98:

- Assisting local medical societies in opening a dialogue with health plans as outlined by the Department of Justice/Federal Trade Commission antitrust guidelines.
- Providing medical societies with action plans, including sample letters and contract provisions, to assist physicians in common complaints before health plans and help physicians and medical societies resolve these issues more effectively through various legal, media, and other strategies.
- Through local medical societies, assisting employed physicians seeking to collectively bargain with their employers, including, if requested, assisting in forming a recognized collective bargaining unit.
- Directly assisting individual physicians and group practices by providing consulting services and strategies to enhance physician/patient presentation before plans on issues of critical concern such as policies and practices that interfere with the patient physician relationship and inappropriate application of clinical guidelines.

While we were at the meeting, we met with three CEOs of different State Medical Associations to review our HMSA Participating Provider Agreement. We used the information gained in these meetings to assist us in our discussions with the HMSA. Our new Medical Economics/MCO Committee will be reviewing all the participating provider contracts covering our members, and we will also send these agreements to the AMA office for their review as well.

Each time a physician attends an AMA meeting for the first time, we seem to hear the same comments, i.e. "Now I understand why we need to be associated with the AMA." It was gratifying to hear the same comment from a new council member the other night. I would like to extend an invitation to any HMA member to attend Council meetings. We meet on the first Friday of every other month starting in December (except for February when the Council will meet on the second Friday due to my visit to the Hiroshima Prefecture Medical Society 50th Anniversary meeting) Simply call Angela at HMA and let us know you are coming, so we can add to the meal order. I look forward to seeing many of you at Council meetings this coming year.

ARE YOU PRACTICING MEDICINE THE WAY YOU WANT TO?

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- Are you prepared to competently negotiate with your employer or employee?
- Do you know how to sell or purchase a medical practice?



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Commentary

Doctor-Assisted Death with Dignity

By A.A. Smyser

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You haven't yet heard of DADD for Doctor-Assisted Death with Dignity. It hasn't been formed yet. But the editor of Hawaii Medical Journal, Dr Norman Goldstein, may suggest it as an umbrella name for diverse national organizations advocating exactly that. He believes the DADD acronym could bring the movement recognition and success like that achieved by MADD for Mothers Against Drunk Driving.

Goldstein won praise both nationally and locally for devoting the last December and March issues of the Hawaii Medical Journal to doctor-assisted death—probably the only medical journal in America to give it such intense attention. Copies went to medical libraries throughout the U.S.

One local doctor's letter to the editor reminded Goldstein that most of organized medicine is opposed to doctor-assisted suicide yet most of HMJ's articles were in favor. She still thanked him for providing the leadership and devoting the time and effort to publish

the journal. It digs into many other topics, ophthalmology most recently. Two issues on pain control lie ahead.

Copies of the journal's reports, mostly written by physicians, became a part of the information-gathering process for the Governor's Blue Ribbon Panel on Living and Dying with Dignity. Goldstein is a panel member, as am I, also a DADD advocate, but other members have positions in opposition, which Governor Cayetano knew when he appointed us.

One of HMJ's subject areas was the Swiss organization known as EXIT, which helps people to die after they pass intense screening as to suitability. None of its practitioners has been prosecuted.

Goldstein has updated data from EXIT showing it approved fatal potions for 210 people in 1996 yet only 110 used them. He believes that in Hawaii, too, the availability of such assistance could become a security blanket ailing persons would welcome but not use.

HMJ also dealt with the Hippocratic oath, often cited against doctor-assisted death. It is a 2,400-year-old pledge, Goldstein points out, that if literally followed would prevent modern surgery. Hippocrates swore by Apollo and other Greek gods and goddesses that, among other things, "I will not use the knife." The oath has been modified for today's medical students.

Goldstein thinks the basic caring sense expressed by Hippocrates can be interpreted today to give compassionate release from suffering for our loved ones just as we already offer it for our pets.

He says "slippery slope" concerns about abuse to cause deaths for the convenience of others can be met by strict guidelines on voluntariness that will reassure both patients and doctors.

As a dermatologist he does not deal with dying patients. If he were an internist, he says, he would even now provide help if the patient wanted it, he knew the patient well, and no other relief from suffering was available. This already occurs in Hawaii, he says, but cannot be publicly reported.

Goldstein was recruited into the Hemlock Society by Dr John Spangler, outgoing president of the Hawaii Medical Association. Out of 2,000 physicians in Hawaii, 1,200 are HMA members.

Spangler testified before a hearing of the Governor's Panel on Living and Dying with Dignity that the American Medical Association opposes doctor-assisted death but the American Medical Students Association supports it.

Hemlock is the oldest of an expanding group of national organizations lobbying for doctor-assisted death, the ones Goldstein thinks could be more effective if they united under a DADD banner.



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Letter to the Editor

Don Blake, APR

**Public Relations
The Hemlock Society USA**

The November issue of Hawai Medical Journal just reached my desk. Congratulations on your continued fine work as editor.

By the way, I think your idea of adopting D.A.D.D. as a meaningful acronym is a good one. It is easy for the general public to understand and accept, and it takes the harsh edge from the general public image of physician-assisted death.

Thanks for your support as a national board member. Perhaps we'll have the occasion to meet when you are next in Denver or elsewhere for a board function.



Military Medicine

Military Unique Curriculum

Benjamin W. Berg MD, LTC, U.S. Army

Graduate Medical education in the Military largely mirrors the civilian sector. Educational standards, and program requirements as prescribed by the Accreditation Council for Graduate Medical Education (ACGME) are identical to civilian training programs. The spectrum of programs available in the US Army is broad. There are primary training programs in virtually all specialties, including Family Practice, Internal Medicine, General Surgery, Pediatrics, Psychiatry, Obstetrics and Gynecology, Radiology, and Pathology. Advanced training in subspecialty areas is also available in some fields, where research and clinical fellowships are established. In recent years there has been a decrease in the Military GME programs, as the overall size of the Military is decreased. Army GME takes place largely at "Major Medical Centers" which are located in Honolulu (Tripler), Washington D.C. (Walter Reed), San Antonio (Brooke) and El Paso (William Beaumont) Texas, Tacoma Washington (Madigan), and Augusta Georgia (Eisenhower). The Fitzsimmons Army Medical Center in Denver, Colorado closed its doors about 18 months ago.

Medical students apply for competitive residency training in Military Hospitals from either a Military sponsored civilian Medical School, or from the Uniformed Services University of Health Sciences (USUHS) which is located in Bethesda Maryland. The Majority of applications for Military internships are from Civilian Medical School applicants who have participated in the Health Professions Scholarship Program (HPSP). These candidates have a four year obligation to serve in the Uniformed Service of their choice, after residency training is completed. The program provides

Continued on Page 386



Harry L. Arnold Jr. MD Case of the Month

HTLV-1 Associated Adult T-Cell Leukemia in a Micronesian Patient: The First Reported Case

**Charles F. Miller MD, Mark D. Cumings MD,
Francis M. Gress MD, and Benjamin W. Berg MD
Hematology - Oncology Service
Department of Medicine
Tripler Regional Medical Center**

Introduction

Adult T-Cell Leukemia/Lymphoma is an aggressive form of lymphoproliferative disease which is specifically caused by infection with human T-cell lymphotropic virus type I (HTLV-I). Infection with this virus is endemic in southwest Japan, the southeastern United States, the Caribbean Islands, and central Africa.¹ More recently, genetically distinct forms of the virus have been identified in Australian aboriginal tribes as well as various isolated populations in Papua New Guinea and the Solomon Islands in Melanesia.²

However, evidence of infection with HTLV-I has not been identified in Micronesian populations.³ This is a report of a case of Adult T-Cell Leukemia in a Marshallese male medically evacuated to Honolulu from the island of Majuro, Republic of the Marshall Islands (RMI), which is in Pacific Micronesia. This case appears to be the first report of a confirmed HTLV-I associated T-Cell Leukemia in a Micronesian patient.

Case Report

A 52-year-old Marshallese male was admitted to the hospital in Majuro, RMI, because of generalized abdominal pain with distention, jaundice, nausea, vomiting, subjective fever and chills, loss of appetite, and shortness of breath.

Two weeks prior to admission, symptoms of nausea and vomiting, diffuse abdominal pain, and loss of appetite began. He progressively developed jaundice, increasing abdominal girth, and subjective fever and chills. On examination, he was found to be jaundiced. His abdomen was markedly distended with diffuse tenderness and guarding but no peritoneal signs. Initial laboratory tests are shown in Table 1. He was treated with Metronidazole 500mg PO q8hrs, Gentamycin 60mg IV q8hrs, Rocephin 1 gm IV q12hrs, and Ampicillin 1 gm IV q6hrs for obstructive jaundice and ascending cholangitis. While hospitalized in Majuro, the patient's white blood cell count rose to 62,000, and after 5 days he was transferred to Honolulu (Tripler Army Medical Center) for further evaluation.

The patient had a history of Hepatitis B infection twenty years prior to admission and left nephrectomy for renal cell carcinoma several years earlier. He was born and raised on the island of Namodrik and lived there until the age of 16, at which time he traveled to Majuro for three years to receive training as a "Health Aide." He frequently traveled to many of the neighboring islands and atolls but had never traveled outside of Micronesia. He took no medications and did not use tobacco or alcohol.

Examination revealed marked jaundice, hepatosplenomegaly,

and diffuse adenopathy with cervical, supraclavicular, axillary, and inguinal lymph nodes. There was bilateral leg edema extending to the knees. Abdominal and chest computed tomographic (CT) scan showed bilateral axillary, precarinal, anterior mediastinal, and mesenteric adenopathy as well as hepatosplenomegaly and moderate ascites. Peripheral blood smear was suggestive of acute leukemia or high grade lymphoma/leukemia (Fig 1). Peripheral blood flow cytometry studies confirmed T-Cell Leukemia (Table 2). Western Blot analysis confirmed HTLV-I infection. The patient was treated with Zidovudine 200 mg PO five times daily and Alpha-Interferon 10 million units SC daily.

The patient's hospital course was characterized by progressive multiple organ system failure including oliguria, anasarca, asterixis, hyporeflexia, and lethargy. A lumbar puncture was performed which revealed no evidence of central nervous system involvement by the lymphoma or leukemia, or CNS infection. Lactulose therapy for hepatic encephalopathy was initiated. The following day the patient's mental status improved and the white blood cell count decreased to 50,000. On the fifth night of admission the patient's temperature rose to 100.7 F and Ceftazidime 1gm IV q8hrs was administered. He developed an allergic reaction so the antibiotic was changed to Imipenem 500 mg IV q6hrs. Administration of 4 liters per nasal canulae of oxygen was required to maintain 92% saturation by pulse oximetry.

On the sixth hospital day AZT was discontinued because of progressive elevation in liver enzymes and liver failure. By the seventh day oliguria developed and IV Furosemide failed to increase urine output. Low grade disseminated intravascular coagulopathy, nonoliguric renal failure with creatinine increasing to 2.0 mg/dl, and possible hepatorenal syndrome evolved and the patient became progressively more somnolent. The patient decided not to continue treatment and he died on the eleventh day of his admission. Despite the development of multiorgan system failure his white blood cell count reached a nadir of $23.5 \times 10(9)/L$ and an absolute lymphocyte count $18.1 \times 10(9)/L$ with treatment.

Pathology

Examination of the patient's admission hemogram and peripheral smear disclosed normal red cell parameters and an atypical lymphocytosis (white count 64,900; lymphocytes 90%) comprising moderately sized cells with immature chromatin, one to several variably conspicuous nucleoli, and variably folded to overtly convoluted and multilobulated nuclear configurations. Cytoplasm was scant to moderate in quantity and non-granular. A conspicuous minority of cells manifested a "hand-mirror" appearance (Fig 1) due to the presence of a cytoplasmic uropod. Platelets were decreased (60,000).

Bone marrow aspirate smears and core biopsy sections revealed cellularity of 50% with a predominance of normal appearing hematopoietic elements. Aspirate smears showed 30% and core biopsy sections 20% of nucleated cells to be lymphoid with immature cytologic features and folded nuclear contours. In core biopsy sections these lymphocytes formed aggregates which occupied non-paratrabeular foci.

Peripheral blood lymphocytes were studied by flow cytometric analysis. Approximately 95% of lymphocytes manifested a mature T helper cell phenotype and were Tdt negative (Table 2).

Bone marrow cytogenetics study disclosed chromosomal abnormalities in 19 out of 20 cells examined, involving complex rear-

Table 1.—Lab Values	In Majuro	In Honolulu
White Blood Cell	52 x 10(9)/L	54.3 x 10(9)/L
Hemoglobin	14 g/dl	15 g/dl
Hematocrit	39%	44%
Platelets	78 x 10(9)/L	66 x 10(9)/L
Absolute Granulocyte Count	8.32 x 10(9)/L	4.3 x 10(9)/L
Absolute Lymphocyte Count	42.1 x 10(0)/L	4.3 x 10(9)/L
Prothrombin Time	13 seconds	19.6 seconds
Partial Thromboplastin Time	36 seconds	52 seconds
Total Protein	7.0 g/dl	6.7 g/dl
Albumin	3.1 g/dl	2.7 g/dl
Aspartate Aminotransferase	394 U/L	426/U/L
Alanine Aminotransferase	160 U/L	146
Alkaline Phosphatase	243 U/L	202 U/L
Total Bilirubin	9.4 mg/dl	15 mg/dl

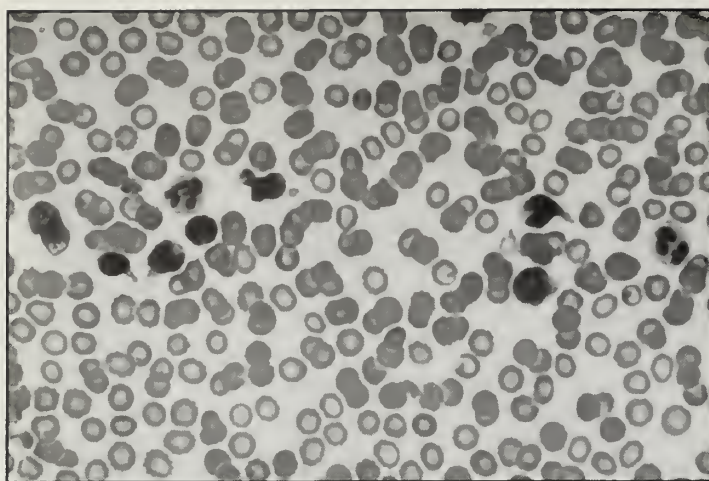
Cell Markers	Percentage of Cells Positive
CD2	96
CD3	94
CD4	92
CD5	95
CD7	4
CD8	2
Myeloperoxidase	2
Tdt	0
CD34	1
CD45	98
CD56	1
HL-DR	17

rangements of chromosomes 1, 9, 12, and 15 [46, XY, del (9) (q12), der (12) t (1;12) (q21; q24), add (15)(q24)]. Peripheral blood analysis disclosed a Western Blot pattern which was positive for HTLV-I antibodies.

The aggregate of these findings was diagnostic of Adult T-Cell Leukemia Lymphoma related to HTLV-I infection.

Discussion

Human T-cell lymphotropic virus type I (HTLV-I) is the first human retrovirus isolated and one of the first viruses to be confirmed as causing human cancer.⁴ In addition to adult T-Cell Leukemia/Lymphoma it has been implicated in Tropical Spastic Paraparesis/HTLV-I-Associated Myelopathy (TSP/HAM), a chronic, progressive degenerative disease of the spinal cord.⁵ Because the virus is endemic in parts of Japan, T-Cell leukemia/lymphoma is the most common type of lymphoma in that country.⁶ The virus apparently infects Cd4+ human T-cells and integrates its proviral DNA into the cell's own genome.⁷ There is genetic variability in viruses from different geographical locations which does not appear to play a role in the clinical presentation of the infection.^{8,9} Major genetic differences exist between viral isolates from Japan, Africa and Melanesia, and the rare isolate from a Polynesian patient has been reported to be virtually identical to the Japanese strain.² Prior reported cases of



Peripheral Blood Smear (600x original magnification)
Atypical Leukemic Lymphocytes with scattered hand mirror cells.

HTLV-I infection in Hawaii were associated with TSP/HAM and occurred in Japanese-American patients whose parents had lived in regions of Japan that were endemic for the virus.¹⁰ This patient represents the first case reported in the English language medical literature of HTLV-I associated T-cell leukemia from Micronesia.

It is unclear how our patient acquired his HTLV-I infection. Since HTLV-I is known to be transmitted by blood products, and contact with body fluids he could have become infected at the same time as his Hepatitis B was acquired. It is not certain how the patient

developed Hepatitis B, however, he denied blood transfusions, even during his nephrectomy. During his work in the Marshall Islands the patient was frequently exposed to blood products. Since HTLV-I has not been previously documented in Marshallese patients, the presumed extremely low prevalence of the virus in that population makes it unlikely that he acquired it through occupational exposure.

Since much of the tertiary health care provided to the Micronesian population occurs at various civilian and military medical institutions in Hawaii, all practitioners should be aware of this first case from that region. While a rare disease, recent publications suggest that significant palliation and even cure is possible with aggressive chemoimmunotherapy using alpha-interferon and zidovudine.¹¹

Investigation of seroprevalence rates of HTLV-I infection in the Republic of the Marshall Islands and other Micronesian populations may provide a window of opportunity to further elucidate the mode(s) of transmission, infectivity, and carcinogenicity of this retrovirus.

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Editor's Note:

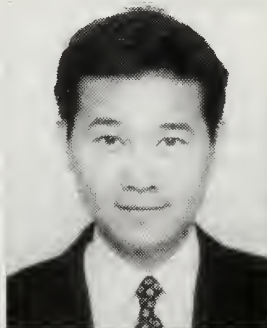
This is our first "Case of the Month." This new feature honors our late editor Harry L. Arnold Jr. MD. Benjamin W. Berg MD will serve as editor and facilitator for this new and unique series of case reports from our Medical Ohana. Manuscripts for the "Case of the Month" may be sent to LTC Benjamin W. Berg, MC, Chief Pulmonary/Critical Care at Tripler Army Medical Center, HI 96859 and a copy to the Journal office.

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Medical School Hotline

The Impact of Changes in Medical Care on Medical Education

Richard B. Friedman MD
Professor Department of Medicine
University of Hawaii Medical School

There have been major changes in health care delivery during the past decade. These changes have affected medical education nationally and in Hawaii. They have resulted in some fundamental alterations in how and where medical education takes place. The impact of these changes in health care delivery has been somewhat muted in Hawaii because the John A. Burns School of Medicine had, from its inception, placed an emphasis on primary care. It was therefore an early leader in utilizing local ambulatory clinics as sites for medical education.

Among the major medical education initiatives that have resulted from managed care are:

1. Emphasis on primary care and utilization of ambulatory clinics as teaching sites.
2. Introduction of distance education and telemedicine techniques.
3. Increased number of courses to make physicians knowledgeable in medical ethics, interpersonal skills and alternative medicine.
4. Use of computer assisted instruction.
5. Introduction of Evidence Based Medicine.
6. Instruction in Women's Health and Geriatric Issues.
7. Teaching of issues related to cost-effective practice in medicine.

Emphasis on Primary Care

Until a few years ago the majority of physicians graduating from American medical schools went on to specialty training. The developing surplus of medical specialists coupled with an increasing demand for primary care physicians ("gate keepers") has resulted in an emphasis on training primary care physicians. State and Federal Government initiatives helped to stimulate this shift. Funds were provided to encourage medical schools to emphasize primary care. The Federal Government began to penalize residency programs that turned out a disproportionate number of specialists.

In the past, the majority of student education occurred on the inpatient wards of large urban hospitals. Now these institutions have constructed their own outpatient clinics and partnered with private clinics to increase student's experience in outpatient medicine.

With the increased shift to managed care, medical schools, hospitals and clinics are coming under increased financial pressures. Medical schools and their affiliated hospitals and clinics must now compete with clinics that do not support teaching programs. The payments once available to support these programs have disappeared in the increasingly competitive health care environment. Private physicians and clinics involved with medical education are finding that they no longer can accept the decreased productivity

inherent in this activity. Medical schools are increasingly being rebuffed in their attempts to find clinical teaching locations.

The University of Hawaii Medical School has always been a leader in its emphasis on training primary care physicians. Medical school clerkships and residency experiences in Internal Medicine, Family Practice, Pediatrics and Obstetrics and Gynecology have for many years occurred at small clinics and physician offices around the state. Major hospitals in Honolulu have traditionally supported large teaching ambulatory care clinics.

Telemedicine and Medical Education

The increased emphasis on primary care has resulted in medical students having their clinical experiences away from the medical school campuses. It is imperative that the medical school faculty continue to interact with the students to teach them the course material. In some cases this has been accomplished by having the students return frequently to the medical school campus. In other cases this is accomplished by having the faculty travel to the clinics. Neither of these techniques has been totally successful. A number of schools have begun to experiment with Teleconferencing to bring students at outlying facilities together with the faculty for frequent interactions. Telemedicine has also made it possible to provide these students increased access to medical school library resources, specialists and even clinical consultations. Whether this technique, by permitting greatly enhanced two way interactions, will be more successful than previously used one-way television presentations remains to be determined.

John A. Burns School of Medicine was an early pioneer in telemedicine through links with the Tripler Army Hospital. A number of initiatives are now underway to use televideo to enhance medical school teaching at locations outside Honolulu.

Medical ethics, interpersonal skills and alternative medicine

High profile legal cases revolving around such issues as death and dying, right to die, and doctor assisted suicides have resulted in an awareness that physicians need training in medical ethics. In the past formal courses in medical ethics were rarely included in the medical school curriculum. It was believed that skills in this area would be developed through actual case experience during residency or clinical practice. Medical schools around the country have realized that their students were not well equipped to handle these issues.

Concerns by clinics and HMOs that graduating medical students had poor patient interaction techniques have resulted in an increased emphasis on teaching interpersonal skills. How to talk to patients, how to deal with the elderly and handicapped individuals as well as members of minority groups are areas of concern. Cultural sensitivity in the practice of medicine has been receiving increased attention.

There is recognition that a large percentage of Americans get some or all of their medical care from alternative care providers (chiropractors, acupuncturists, herbalists, naturalists and others). Physicians are often poorly informed about these practices. A number of medical schools have recently developed courses in Alternative Medicine.

Being a multicultural state, Hawaii was an earlier leader in teaching culturally sensitive medicine. Exposure to alternative medical practices has long been part of the medical student's

experience at many rural clinics throughout the State.

Computers in Medical Education

For over a decade there has been a general belief that computers should play a significant role in medical education. Computer Assisted Instruction (CAI) may be useful in helping medical students learn factual material. Early programs at such schools as Ohio State, University of Illinois and Harvard Medical School, indicated that the computer could assist the medical school faculty in presenting this material. Computer simulations may be helpful in teaching students how to make cost-effective decisions about diagnosis, therapy, and follow-up care. They can do so without exposing patients to the risks inherent in receiving care from students still in training. Computer-assisted mannequins permit students to practice surgical techniques, resuscitation skills and a myriad of other manual techniques.

Recently there has been considerable interest in the Internet and the World Wide Web (WWW) of the Internet in medical education. Courses developed on the WWW would permit greater sharing of educational material among medical schools and permit more convenient access to computer assisted teaching techniques.

While such material has become increasingly popular, there is little data supporting a clear benefit in medical education. In a recent article in *Academic Medicine* this author pointed out ten reasons why the Internet and Computer based medical education material may not be a panacea. These included: internet based courses are not well integrated into the medical school curriculum; these programs are often poorly designed; frequently students are not tested on the content presented in these courses; and computer equipment is frequently difficult to access and non-standardized.

The University of Hawaii has an Instructional Resources Laboratory that gives students access to computer teaching modalities. Special classes are available to teach students computer skills and most students are familiar with the medical resources on the Internet. At Queens Medical Center, students and residents gain firsthand experience with computer based order entry.

Evidence Based Medicine

The emphasis place by HMOs on the cost-effective practice of medicine has increased the requirement that physicians be able to defend their clinical decisions before review groups. This has resulted in an increased interest in evidence based medicine. There is growing recognition that there are some medical practices that have not been subjected to rigorous clinical testing. This has resulted in increased interest in teaching students the careful review of the literature in order to ascertain which practices are based on sound clinical evaluation.

Women's and Elderly Health Issues

Various factors have contributed to the belief that traditional medical education does not place sufficient emphasis on the study of women's diseases. Medical schools have developed courses in women's health to make physicians more responsive to this group's needs.

As the general population ages, more and more patients are over 65 years of age. A number of years ago it became apparent that these older patients have very particular health needs. Their reactions to medication, disease profile, physiologic changes associated with aging, inability to take care of themselves and other issues separate them from the general population. The specialty area of Geriatrics has evolved over the past ten years with specialized courses for medical students, residency and fellowship programs, special research funding and Specialty Board designation.

The University of Hawaii Medical School has special programs for women's health needs and has been designated a special Geriatric Research Center.

Cost Effective Medicine

Managed care has brought with it an increased emphasis on cost-effective medicine. Students are being taught how to calculate the cost-effective component of test selection. They are being apprised of the cost of various diagnostic and therapeutic modalities in order to achieve cost efficiencies.

These are very exciting times for medical education. The John A. Burns School of Medicine has been a pioneer in meeting many of these challenges by actively promoting and emphasizing training in primary care in outpatient clinic settings. The curriculum reflects a concern for training physicians who are grounded in issues relating to medical ethics, interpersonal skills, alternative medicine, women's health, geriatrics, evidence based medicine and cost-effective medicine.

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William Crawford Gorgas

He Set the Standard of Military Preventive Medicine

Colonel Thomas M. Cashman MD*

William C. Gorgas spent the first twenty years of his career dedicated to the daily tasks of rural patient care. When assigned to Havana, his practicable application of Walter Reed's demonstration of Yellow Fever transmission resulted in the elimination of Yellow Fever within eight months. His perseverance in applying principles of arthropod born disease control allowed the completion of the Panama Canal. He developed the Sanitation Corps, presently Army Environmental Health Services, and initiated emphasis on preventive medicine for the soldier. He served as the Surgeon General of the Army during World War I, when for the first time in our history fewer soldiers died from disease than from combat casualties.

"The success of any system of sanitation ... will depend a great deal upon the choice of the man who has charge of carrying it into execution. If he believes in it, has tact, is enthusiastic and persevering, it will succeed. If he is discouraged by difficulties and opposition he will fail, even if his system is correct."

Thus, William Crawford Gorgas, whose achievements in infectious disease control allowed the completion of the Panama Canal, summarized his own approach to attain his professional goals. The genius of this man, the prototype for U.S. Army Preventive Medicine Officers and who initiated the Army Sanitation Corps, was his ability to persevere, to be open to the ideas of others, and to make practical use of them.

William C. Gorgas was born on October 3, 1854, near Mobile, Alabama the son of a U.S. Army Ordnance Officer. His family lived in Charleston, South Carolina, when the Confederates fired upon Ft. Sumpter. His father Josiah, a Pennsylvanian married to an Alabama woman, accepted a commission as a Brigadier General of Ordnance in the Confederate Army.

Young William Gorgas lived in Richmond, Virginia, during the Civil War. There he met Jefferson Davis, Robert E. Lee and Thomas "Stonewall" Jackson in the front parlor of his home when they came to confer with his father. Staunchly Confederate, he went barefoot during the last winter of the war in empathy with the ragged Southern Soldiers. He remained loyal to the South throughout his adult life and as a Federal Officer serving in Cuba, still argued that if the South had won secession, it would have eventually abolished slavery. His mother, deeply religious with a strong personality, remained a lifelong influence on him. Her keen sense of humor and zest for telling tales was apparent in Dr Gorgas who was an entertaining conservationist and often related his favorite stories, many about the Pirates of Panama.

Growing up, young William was hot-tempered, an indifferent student and a good athlete. During his military career he did a remarkable job controlling that temper. From early on he expressed an interest in the military, but his father actively discouraged this ambition. Nevertheless, he applied to West Point. President Grant's regime would not appoint the son of one who rose to the rank of Lieutenant General of Ordnance of the Confederacy and whose skills and dedication had prolonged the Civil War. William studied at The University of the South in Swannee, Tennessee, and as a student experienced his first encounter with Yellow Fever. He served as a volunteer in a New Orleans epidemic, and two of the four volunteers from his university died of this disease. Returning to school, he turned to his surviving friend and said, "Matt, I am going to try to find something that will drive this terrible thing from the earth."

Gorgas completed his studies in Swannee and, on his father's advice, studied law in New Orleans. After one year he discontinued his law studies. Still aspiring to the military, he studied medicine at Bellevue Medical College in New York City, and planned to make a career in military medicine. At Bellevue, he was a student of Dr William Welch, who in later years, as Dean of Johns Hopkins Medical College, strongly supported Gorgas as the Chief Sanitation Office of the Panama Canal Zone. While a medical student, he volunteered to help in a Yellow Fever epidemic in Memphis, Tennessee, but could not go because he lacked immunity to the disease. He completed his internship at Bellevue in June of 1880 and, in spite of his father's objections, accepted a commission as a First Lieutenant in the U.S. Army Medical Corps.

For the next twenty years, Dr Gorgas practiced inconspicuously at various isolated posts in Texas, North Dakota, and Florida. He was congenial and enjoyed an active social life. His cheerful bedside manner was a consistent quality in his practice. He was a dedicated physician and on two occasions almost froze to death, riding out in the North Dakota winter to attend the birth of Sioux infants. Against

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orders because he was not immune, he attended Yellow Fever patients and eventually contracted the disease. However, because of his subsequent immunity, he then received further assignments to care for Yellow Fever patients. One of these patients was Marie Doughty, whom he later married. Because of his interest and work with Yellow Fever he came in contact with Dr Josiah Nott, who coincidentally was the physician who attended his own birth. Dr Nott had published an article in *The New Orleans Medical and Surgical Journal* stating that malaria and Yellow Fever were transmitted by insects, possibly mosquitoes. However Dr Nott failed to convince Gorgas of his theory.

In 1901 the Army ordered MAJ William Gorgas to special duty in Havana to serve Yellow Fever Patients. While there Gorgas cared for Dr Victor Vaughan, stricken with the disease. Gorgas greatly impressed Dr Vaughan with his skills as a physician. Dr Vaughan, who became President of the American Medical Association, became an important ally to Gorgas during the Panama Canal Project. In Havana, Gorgas at first held to the miasma (filth) theory of Yellow Fever transmission and took steps to clean up the city. The incidence of Small Pox, Typhoid, and Dysentery decreased and the death rate in Havana dropped below that of several European cities. However, the incidence of Yellow Fever increased.

Gorgas became friends with Dr Carlos Finlay, who developed the theory that the Stergomyia mosquito (*Aedes aegypti*) transmitted Yellow Fever. Because of this theory, many fellow professionals considered Finlay to be a crackpot. Gorgas himself did not accept this theory either but remained respectful of Dr Finlay. Dr Henry R. Carter of the U.S. Public Health Service was convinced that Finlay's theory was correct. He had observed an epidemic in Mississippi and noted that Yellow Fever patients could be visited without hazard within the first ten to twelve days after the patients had become ill. Beyond that time, even if the patient had died, visitors were in mortal danger. Carter concluded there was a period of "intrinsic incubation." He attempted to publish his findings and contribute further to Finlay's theory. He concluded that transmission by Stergomyia required a 10 to 14 day incubation period in that mosquito after it had taken a blood meal from the Yellow Fever victim. The *Journal of the American Medical Association*; *JAMA* initially rejected his paper because it was too long. Publication of these findings were delayed two years.

Army Surgeon General Sternberg, doubting another popular theory of the time that Yellow Fever was due to a yet unproved "bacillus icteroides," dispatched the Walter Reed Commission to Havana. Walter Reed demonstrated transmission of Yellow Fever by the Stergomyia mosquito, and Gorgas took great care to credit Finlay with his important deductions, singling out the correct mosquito from over 800 species. Having observed a difference of virulence in Yellow Fever between summer and winter, Gorgas preserved a winter mosquito to infect patients as an immunization method. However, after several deaths, he deemed this approach too dangerous. Gorgas although not totally convinced that the mosquito was solely responsible for Yellow Fever transmission, decided to attack the mosquito in an attempt to break the disease cycle. Walter Reed replied to him "it can't be done." Dr Gorgas studied the habits of the Stergomyia. He found it to be an urban dweller with a preference for fresh water. He established a clean-up campaign using fresh water larval traps and appointed district officers to scour the city for unprotected fresh water. He screened the windows of

hospitals and the homes of Yellow Fever patients. He put screens on catchment water barrels and fined violators who left unprotected water on their premises five dollars. If the violators cooperated and removed unprotected water, Gorgas returned the five dollars. The Cubans, who assumed that all bureaucrats were dishonest, were so enamored when Gorgas returned their five dollars that they continued to cooperate. This program was so successful that Havana has been free of Yellow Fever since late 1901. Gorgas' mosquito control program also greatly reduced malaria. There had been nothing comparable in medical history to this remarkable war on mosquitoes.

In 1902 the Army promoted Gorgas and summoned him to Washington, DC. President Roosevelt, on the advice of Dr William Welch, appointed him as the Chief of Sanitation of the Panama Canal Project and sent him to Europe and Egypt. Gorgas studied the French's failed attempt to complete the Panama Canal and their successful Suez Canal project. He found that twenty-five percent of the French work force died during the project and one third of the force missed work each day due to illness. More than 22,000 men died of infectious disease during the French attempt. This experience convinced Gorgas that for the Panama Canal project to be successful he must control Malaria and Yellow Fever. Gorgas understood that Malaria was the greater threat and caused the greatest loss of French lives. "... if we do not control malaria our mortality is going to be heavy." He decided to attack Yellow Fever first to avoid panic should an outbreak occur. He concluded that if twenty to thirty thousand men came to Panama, the annual death toll could reach three to four thousand. On completion of two years in Europe and Egypt, Roosevelt sent Gorgas to the Canal Zone as an advisor with no real authority, rather than appoint him to the Panama Canal Commission. The American Medical Association had strongly supported that Gorgas be appointed to the commission. Thus William C. Gorgas began his trial of perseverance. Courtly, affable, described by an American engineer as "a grand, quiet, lovable man," he was unequivocally devoted to duty and physically hardened from hardships of frontier duty. His imperturbable and sensitive manner hid a disciplined, tough minded personality of such perseverance that he was the only senior official to see the Panama project through from start to finish.

The Retired Admiral Walker, chairman of the Panama Canal Commission and an engineer, did not agree that mosquitoes transmitted Yellow Fever and Malaria. Walker was obsessed with the notion that corruption was the cause of the French failure and would not fund a number of projects. He ignored Gorgas' appeal for supplies and experienced personnel. As a result Gorgas arrived in Panama with Dr Henry Carter and five others with virtually no materiel. They found numerous Stergomyia and Anopheles mosquitoes in every building. They found larvae in earthenware jars holding drinking water, open cisterns, rain barrels, pockets of ground water, crockery rings surrounding plants and in the shallow pans of water under the floor posts hospital beds to prevent ants from getting into the beds. There were no window screens and the hospital staff, French doctors and Sisters of Charity, were all infected with malaria. After dark the hospital staff would wrap themselves in bandages soaked in citronella to protect themselves from the swarms of mosquitoes.

Gorgas considered the mosquito as the most deadly predator of Panama and intended to solve the problem by learning the biology



William Gorgas as the Army Surgeon General



General Gorgas talking with a patient on the grounds of Walter Reed Army Hospital



William Gorgas as a Major about the time of his assignment to Havana



William Gorgas viewing a mosquito breeding site in Panama

of the specific mosquitoes in order to destroy them. Walker publicly ridiculed Gorgas, would not support him with resources, and criticized him for wasting worker hours chasing mosquitoes and wasting material for fumigation programs and screening buildings. General George Davis, Governor of the Canal Zone, who professed great friendship for Gorgas, tried to "set him right," to get these wild ideas out of his head. Gorgas repeatedly sent urgent cables for supplies and material. Walker answered evasively if at all and told Gorgas by return cable that cables were too costly; use the mail.

This commission ruled from Washington DC and rarely visited Panama for fear of Yellow Fever. No one on the commission had ever organized a giant construction project, nor were they accustomed to dealing with the massive supply and labor problems. None had medical training, and they considered the canal solely as a problem of engineering. Scrupulously honest, Walker was convinced that corruption was the only cause of the French failure. He put enormous obstacles in the way of resource requests often not reading requests to fund projects. The American Medical Association (AMA) sent Dr A.L. Reed to Panama on a fact-finding mission. His findings and report of the obstructionist posture of the Walker commission, along with political pressure from the AMA, resulted in the firing of Walker.

Theodore Shonts, the new commissioner, immediately laid the groundwork to replace Gorgas with "a man of more practical view," an unknown Osteopath whose views on disease control agreed with Mr. Shonts. During this time of trial, friends counseled Gorgas to quit. His secretary told he would get so upset he would sweep his papers into his desk drawer and go off a few days to cool off. Nevertheless, his wife described his basic nature as cheerful and he continued to enjoy dinner parties, his friends, and storytelling.

Shonts forwarded his recommendation to replace Gorgas through Taft, Secretary of War. Taft, a friend of Dr A.L. Reed who had just exonerated Gorgas, approved the recommendation and passed it on to President Roosevelt. Roosevelt first sought the advice of Dr W.H. Welch, Dean of Johns Hopkins School of Medicine, and his friend, Dr Alexander Lambert. Welch advised that Gorgas was the most qualified for the job, and Lambert told Roosevelt that the major obstacles to building the Canal were Yellow Fever and Malaria. "Keep Gorgas and give him the proper authority and the Canal will be built," said Lambert.

President Roosevelt rejected the proposal to remove Gorgas and told Shonts to give the doctor his full cooperation. Shonts changed his attitude. Gorgas oversaw the development of two major hospitals in the cities of Colon and Panama and several station hospitals within the Canal Zone interior. He visited patients in the hospital regularly as a clinician, although sanitation was his primary effort. He established a mortality

**Until theres a cure,
theres the Diabetes Association.**

record, successfully dealt with respiratory diseases due to overcrowding, upgraded a leprosarium, eliminated Yellow Fever, and controlled Malaria. The last case of urban Yellow Fever in Panama occurred in December 1905. Four thousand workers lost their lives during the American era as compared to 22,000 during the French era.

Dr Gorgas continued to have difficulties with engineers. Lt. Colonel G.W. Goethals, described by Marie Gorgas as power hungry, took over as chief engineer. His authoritarian leadership style conflicted with Gorgas' more persuasive manner. Goethals attacked the cost of sanitation, about \$350,000 per year, complaining that sanitation expenses were five percent of the total costs of building the canal. He cut spending and in some cases he was right. In the case of grass cutting he was able to clear more area at less cost. The Yellow Fever control program continued to progress successfully. Gorgas blamed Goethals for incomplete control of Malaria. Goethals, in turn, wrote that Gorgas had done little and the real credit of Yellow Fever and Malaria control should go to Walter Reed and Ronald Ross. Ross had visited the Canal Zone and described Gorgas' campaign as sound in every detail. Goethals also took credit for Yellow Fever control through the accolades of J.G. Hibben, then President of Princeton University. It is difficult to understand why the engineer in charge of such an internationally important project would become involved in a debate about where the medical credits lie. Perhaps it was because of the significance of the infectious disease problems. Achorn, in his *History of European Civilization and Politics Since 1815*, states that the completion of the canal was a "triumph of medicine far more than of engineering skill." Yet it was a great engineering feat.

On completion of the Panama Canal, Gorgas traveled to South Africa to consult on the control of pneumonia in gold miners. While there he learned that President Wilson had appointed him the Surgeon General of the Army. During his tenure as Surgeon General he also served a term as President of the AMA.

In 1916, with the impending war in Europe, Surgeon General Gorgas began to build a strong Medical Reserve Corps. His goal was to establish an environment of "hygienic competence for the American soldier." He enlisted the support of many of the country's most prestigious physicians, such as the Mayo brothers, and established a legacy of excellent medical care. He eliminated the limit of Major as the highest rank Reserve medical officers could attain. From 1916 to June 1918 the Army Medical Department grew from fewer than 1,000 officers to 23,000. Professionals included physicians, dentists, nurses, veterinarians, and sanitation officers. By the end of the war, there were over 32,000 medical officers, 35,000 civilian physicians, 22,000 nurses, and 250,000 enlisted personnel in the Army Medical Department. Hospital beds expanded from 3,843 to well over 100,000 in 92 hospitals in France and the United States. Doctors performed over six million induction exams. Preventive medicine practices included vaccinations, emphasis on exercise, diet, proper clothing, adequate space, proper ventilation of the barracks, and recreational sports. Gorgas was instrumental in devel-

oping the concept of government responsibility to wounded soldiers, which included returning them to a useful and productive civilian life.

Because of the rapid manpower expansion during the war, troops experienced several epidemics of measles and pneumonia. Congress severely criticized the Surgeon General and the Army Medical Department. Gorgas testified before several congressional committees, and these investigations exonerated him as a competent administrator. These hearings established that authorities picked camp sites without medical input and developed living areas without adequate spacing or medical facilities. As a result of these hearings, Congress shifted the blame to the Secretary of War.

Because of his remarkable achievements as Surgeon General, William Gorgas was the first physician to attain the rank of Major General. However, he continued to refer to himself as "Doctor," aligning himself with the physicians in the field and clearly establishing his primary role as an Army doctor.

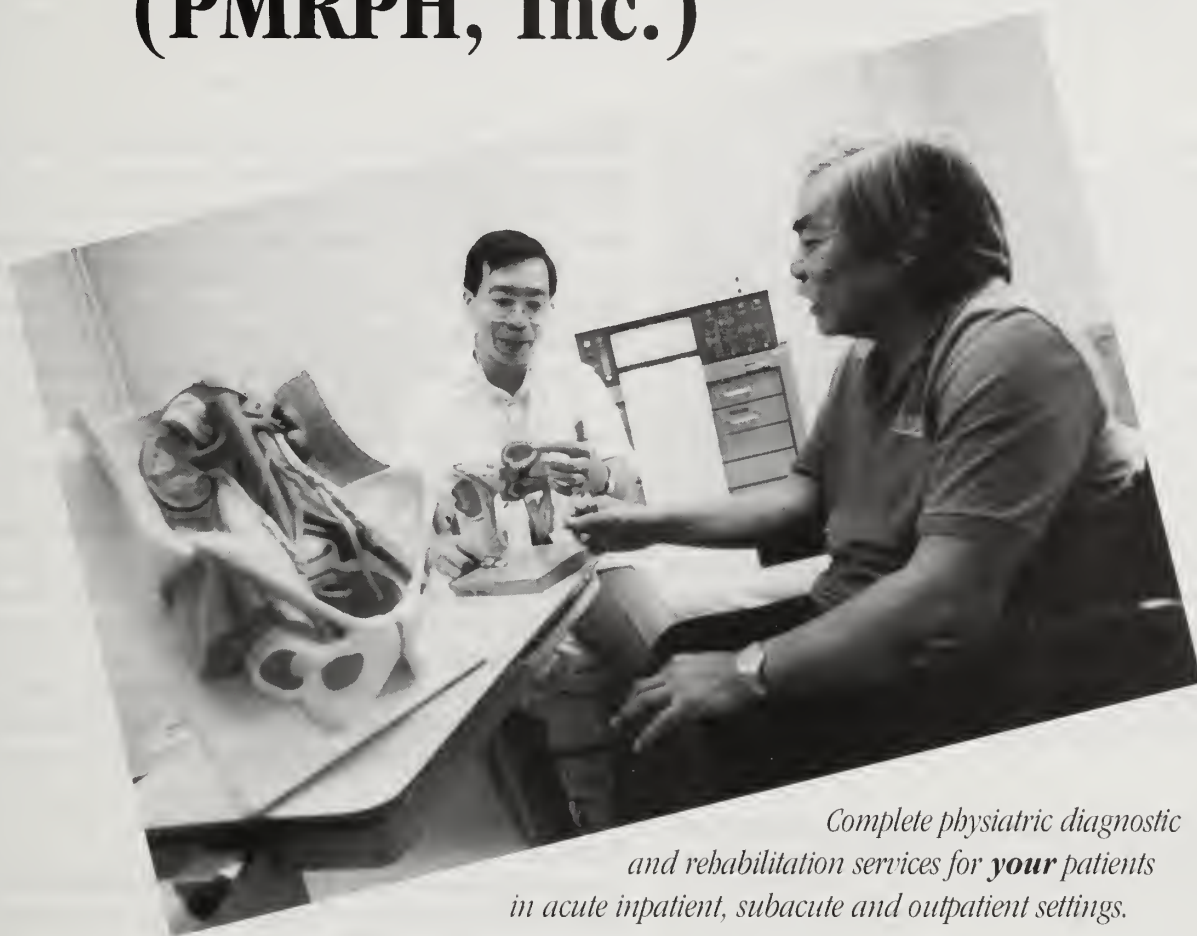
After retirement from the Army, Gorgas went to Peru and Ecuador to pursue his conquest of Yellow Fever. While visiting London, he suffered a stroke. This illness prevented a scheduled audience with King George the Fifth. The King broke protocol, stating that if Gorgas could not come to him, he would go to Gorgas. On this visit, the King of England elevated Dr Gorgas to Knight Commander of the Most Distinguished Order of St. Michael and St. George. Four weeks later, on July 3, 1920, William Gorgas died and his body was returned to America and interred in Arlington Cemetery.

William C. Gorgas realized his genius in his ability to synthesize the ideas of others into a practical concept that benefited the world community. He was a master of organization and diplomacy who could enlist the cooperation of the of eminent physicians and statesmen.. Yet he also stayed in touch with the common man. As Surgeon General, he took time to write to a dying Army private. His career was a testimony to persistence and courage. He was a gentleman with a vigorous joy of life whose self-discipline leadership by example, and persuasiveness led to the control of Yellow Fever, Malaria, and other communicable diseases. He developed Army sanitation and because of him, the American Soldier lives today in the most hygienically sound environment in all of military history.

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Herbal Medicines in Hawaii From Tradition to Convention

Scott A. Norton MD, MPH, MSc*

The stories of kava and chaulmoogra demonstrate the importance of herbal products in ancient and recent Hawaiian medicine. Kava is a psychoactive beverage that has been used ceremonially for millennia throughout the Pacific. It is a nonfermented depressant that causes tranquil intoxication in which thoughts and memory remain clear. Its broad pharmacologic activity led to use in Hawaii to treat skin disorders and later in Germany to treat gonorrhea. Kava is now available outside the Pacific basin as a relaxant, emerging as a popular, albeit deritualized, natural product. In the late 19th century, the main treatment for leprosy was chaulmoogra, extracted from Hydnocarpus seeds. Chaulmoogra had been a traditional treatment for skin diseases in Ayurvedic and Chinese medicine. Chaulmoogra from Asian markets was expensive and usually adulterated so the USDA decided to plant Hydnocarpus in Hawaii. Joseph Rock, a botanist at University of Hawaii, trekked through southeast Asia collecting fresh seeds to plant on Oahu. Rock's trees provided chaulmoogra for leprosy patients on Molokai and elsewhere until it was replaced by dapsone. Chaulmoogra, once the treatment for leprosy worldwide, is now nearly forgotten; kava, once poorly known outside the Pacific, is now a widely-used alternative medicine. Hawaii will probably continue its role in the transition of plants from traditional use to conventional use.

Introduction

The Hawaiian Islands emerged from the Pacific seafloor over the past several million years. Each island arose as a volcano and passed

through its geologic maturation, activity, dormancy, senescence, extinction, and subsidence. The island chain has no land connections; therefore all forms of life arrived here as colonists. Wind, water, and airlifts of seabirds brought the founding members of Hawaii's flora and fauna. In Hawaii's isolation, the ancestral plants and animals evolved into unique species, often quite different from their ancestors. Relatively few ancestral species acquired a foothold on Hawaii and from few, we now have many descendant species. Hawaii has the world's most richly endemic flora; nevertheless it is a depauperate flora.

Many of the plants that outsiders most closely associated with Hawaii are introduced. There are few native orchids, for example, and coconut palms were introduced by the ancient Polynesian voyagers who settled Hawaii. The Polynesian settlers brought with them 30 or so plants that were eminently useful in the ancestral homeland.^{1,2} These include the staples for consumption, construction, clothing, art, and medicine, such as breadfruit, taro, sweet potato, coconut, banana, sugarcane, hala, and noni (Table 1). Many of these have become naturalized and are now fully a part of the Hawaiian landscape, such as coconut palms, wild ginger, and the state tree, the kukui.²

Kava

One of the thirty or so plants brought by the settlers, kava, has pharmacological activity that led to its use in both traditional ceremonies and in traditional medicine.³ Kava refers to both the plant and the beverage that is made from the plant. The kava beverage has psychoactive effects that produce a calm, tranquil effect but thoughts and memory remain clear. The plant probably originated in Vanuatu (the former New Hebrides) but, as Pacific peoples migrated, they carried their most useful products with them.⁴ Kava became widely used in rituals throughout the Pacific's three ethnogeographic regions: Polynesia, Micronesia, and Melanesia. The plant has become naturalized on many high islands with rich soils but it is absent from coral atolls and from temperate islands such as Aotearoa (New Zealand).

Western scientific attention to kava started with the Forsters, father and son, who served as the naturalists on Cook's second voyage.^{5,6} They prepared the proper Linnean binomial, *Piper methysticum*, which means "intoxicating pepper." Kava is in the family Piperaceae, meaning it is a true pepper closely related to black pepper and to the pepper leaf used in preparing betel quids.

Kava is a shrubby plant with jointed stems and heart-shaped leaves. There are perhaps two-hundred varieties of the kava plant in the Pacific, based mostly on differences in stem morphology. The varieties also differ in their potency. The psychoactive components are most concentrated in the lower stems and upper roots of the plant.

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Traditional Kava Preparation and Ceremonies

There are several traditional ways to prepare kava, differing by ethnogeographic region. The parts of the plant with the greatest concentration of active ingredients are the lower stems and upper roots. These portions were gathered and prepared into the kava beverage according to the practices of the ethnogeographic region. In Polynesia, for example, a group of young people, selected for their strong teeth, chewed the roots and collected the macerated root pulp in a kanoa or kava bowl. Water was added and the turbid mixture was strained through the inner bark of the hau tree⁴ (although in Hawaii, the pounded fibers of a sedge, 'ahu'awa, were used²). Nowadays chewing is uncommon outside parts of Vanuatu. Kava is still prepared by young people, but using Western tools such as this mortar and pestle made from a steel drum and a car axle or food processors. At night in traditional villages in Fiji, Tonga, and other islands, one hears the thumping of kava being pounded, albeit with modern modified techniques.

The traditional kava ceremony, on the other hand, has remained relatively unchanged for millennia. It is a ritual attended only by men, usually those of the higher castes. All members sit, usually barefoot and cross-legged, on the ground. The presiding members and honored guests have their places, as do the men who prepare, mix, and serve the kava. Cups of kava are filled, passed to an individual for consumption, returned, and refilled in several-to-dozens of rounds in an evening. The first Western illustration of a kava ceremony was prepared by John Webber, illustrator on Cook's third voyage.

Kava is a powerful symbol of traditional culture in Pacific society.³ This is reflected in the flag of the State of Pohnpei in the Federated States of Micronesia where the kava (sakau) cup is central item. The watermark on Western Samoa's paper currency is the tanoa, or ceremonial kava bowl. But in this century, kava has been deritualized. On many Pacific islands, kava is no longer restricted to men of a certain class or for consumption during specified occasions. It is a social beverage consumed with those with whom you wish to have warm social interactions. It is still consumed in a group setting; there are no solitary drinkers. The calming effects of the beverage distinguish it from alcohol that is often accompanied by disinhibition and violence, often severe domestic violence. For this reason, kava was introduced by Fijian missionaries into some Australian aboriginal communities to replace alcohol and the frequent social hazards that stem from alcohol in that community.⁷

Kava's neuropharmacologic properties are that of a spinal depressant. Overindulgence in kava can cause transient ataxia or an uncoordinated walk because it depresses both the movement and sensory functions of the spinal cord. Coordinated walking may become difficult because one has diminished control over one's muscles and because of the difficulty in sensing where one's feet are. Because of this ataxia, some societies grade the beverage's potency as a one-day, two-day, or three-day kava, based on duration of lingering effects.

Kava Dermopathy

Kava dermopathy is a side effect that interests me, as a dermatologist, greatly. Kava dermopathy is an acquired reversible ichthyosis³ – or scaly skin eruption. It arises after prolonged and excessive consumption of kava and appears as a generalized, shiny, scaly skin resembling a cracked porcelain glaze. On some islands at the time

of Western arrival, this skin disorder was a mark of prestige for only a few noble were able to spend their days in the consumption of kava. Commoners, instead, fished or worked in the fields but some members of the highest castes participated in daily kava circles. In many Pacific societies, traditional healers induced kava dermopathy to other skin diseases, most likely superficial fungal infections and psoriasis. People with skin diseases were instructed to drink kava until their skin became scaly; then the kava was withheld. The kava eruption reversed and the scales would shed, descending from the head.⁸ As the dermopathy resolved so did, according to traditional practice, the other skin disease.

The cause of kava dermopathy is unknown. Several explanations, some traditional, some modern, have been proposed. In Samoa and Tonga, the explanation recounts a Tui Tonga (King of Tonga) who sailed to an outer island afflicted by drought and famine. The islanders had no food to offer as a gift so the local chief sacrificed his beautiful but leprous daughter. The Tui Tonga was honored by the sacrifice but declined to eat the flesh of the young girl. Instead, he instructed the girl's father to bury her body behind her house. From the burial site, the first kava plant emerged. Today, those who drink the beverage made from kava will acquire the girl's scaly, leprous skin.^{3,9} Western explanations are less colorful but no more supported by scientific evidence. Suggestions that kava dermopathy is a form of pellagra (a dietary deficiency of niacin or tryptophan), a photoeruption, or an acute allergic dermatitis are disproved by skin histopathology and other studies. Ruze suggested that kava may interfere with cholesterol metabolism necessary for proper keratinocyte formation.¹⁰ This hypothesis warrants further investigation as a better understanding of cholesterol metabolism might influence the management of many more serious medical conditions.

Pharmacology of Kava

Kava extract contains about fifteen compounds called kavalactones, all of which are structurally and pharmacologically unique.⁴ Kava's neuropharmacologic effects are also unique which explains why early Western descriptions of kava are so often muddled. Kava is non-narcotic, non-opiate, nonfermented, nonalcoholic, nonhallucinogenic, and physiologically nonaddicting. The word narcotic, by the way, has both pharmacologic and legal definitions, neither of which apply to kava. Kava's range of pharmacologic actions was recognized by traditional healers and the beverage was used for more than just its relaxant, calming effects. Kava was used to treat skin disorders (as described above), to treat asthma and other lung disorders, and to treat urologic problems.¹¹

Kava in the West

Kava was first adopted into a Western pharmacopoeia in Germany where kava once served as a standard treatment for gonorrhea. Germany's interest in kava began with its colonization of the western Pacific around the turn of the century. German-occupied islands where kava was consumed ritually include what is now American Samoa in Polynesia, Papua New Guinea in Melanesia, and Pohnpei in Micronesia. German biochemists, finest in the world a century ago, extracted and identified the constituents of kava. German physicians used kava preparations to treat gonorrhea until the advent of penicillin.

In recent decades, kava has been used to control experimental

seizures in laboratory animals and to attempt control of psychosis in humans. Trials with kava in people were stopped because kava dermatopathy developed.¹²

Kava is, nevertheless, widely available in the West. In Germany and France, it is a prescribed medicine. In the United States, it is available at many health food stores and so-called nutrition centers. Kava is available as tablets, alcohol tincture, powder, and unprocessed root. Most kava products are marketed towards non-traditional users. Pacific islanders living in the United States, may now purchase boxes of instant kava in which root powder wrapped in a muslin bag is steeped in water to prepare the beverage for ceremonial and deritualized use.

A 1996 *Newsweek* cover story entitled "The Natural Drug Culture: From Herbal Ecstasy to Melatonin: What are The Risks?" quoted an herbal medicine entrepreneur, Shayan, who remarked that, "Kava is the next big thing. We think it can be as big as coffee."¹³ There is considerable financial interest in the kava-growing Pacific and among entrepreneurs to introduce kava widely into western society. Marketing efforts, in most cases, accent the allure of tranquil life on a Pacific island because the scant amount of kavalactones in these preparations is unlikely to produce physiologic effects.

In addition to its emergence in the botanicals industry, kava may make the leap from traditional Pacific medicine to conventional Western therapeutics. Conventional pharmacologists and physicians continue to study kava for its neuropharmacologic and psychoactive effects. Kava's effect on the skin also deserves further study as it is probably due to subtle interference in cholesterol metabolism.

Chaulmoogra

The history of modern medicine in Hawaii is closely associated with leprosy or Hansen's disease (HD). The disease was introduced to the islands by Chinese peasants brought in to work in the canefields. The native Hawaiian population was vulnerable to the disease which then ravaged native populations. People with visible stigmata of leprosy were isolated for life in the Kalawao settlement on Molokai. The fear historically associated with HD comes from the disfigurement caused by the disease and the notion that it was an incurable and highly contagious condition. There was little hope for effective treatment until the 1850s when several promising reports emerged from the British Medical Service in India. The reports claimed that a local herbal medicine, chaulmoogra oil, could control the disease.¹⁴ This brought chaulmoogra out of the realm of traditional medicine and into the mainstream Western pharmacopoeia.¹⁵ Chaulmoogra quickly became the treatment of choice for HD worldwide yet very little was known about it. All of the chaulmoogra oil used in western medicine was purchased from native bazaars in Burma and Siam. The demand for chaulmoogra was enormous but the supplies were insufficient, often adulterated, and always expensive.

University of Hawaii and Chaulmoogra Production

Chaulmoogra was considered so important that the United States Department of Agriculture (USDA) decided to break the Asian chaulmoogra cartel. In 1920, they hired Joseph Rock for the job.¹⁶ Rock taught botany and Chinese languages at the University of Hawaii and was one of the premier botanists on the islands, having

written *The Indigenous Trees of Hawaii* in 1913. For months, Joseph Rock trekked through the rainforests of Siam and Burma in search of chaulmoogra trees. This was no simple task as the tree was scarcely known to Western botanists and it grew in just a few relatively inaccessible mountainous regions. But after a year, Rock had gathered enough seeds to return to Hawaii.^{17,18} The USDA used the seed to start a chaulmoogra plantation on 30 acres in the Waiahole Valley on Oahu. After a decade, the young chaulmoogra trees were producing enough seeds to supply oil for American leprosaria, such as the ones at Carville and Molokai.

The chaulmoogra tree is *Hydnocarpus kurzii* but the obsolete name generic name, *Taraktogenus*, appears in much of the older literature. There are about 40 species in *Hydnocarpus*, mostly in southeast Asia.¹⁹ Medicinal oils were extracted from the seeds of three species. The tree stands about 40 feet tall and has shiny green leaves. The fruits are about the size of an orange with a thick velvety-textured skin. Inside the fruits are dozens of hard, angular, marble-sized seeds. To make the oil, the seeds are crushed and subjected to pressure extraction. The resulting amber-colored oil is a mixture of two fatty acids based on a cyclopentane ring that differ slightly in their chemical composition.²⁰ These acids were named chaulmoogric and hydnocarpic acids after the common and scientific names of the plant. The best method of extracting oils was developed by Dr Arthur L. Dean, second president of University of Hawaii.²¹ Dean's derivative, as it was called, was the mainstay of chaulmoogra production around the world for many years.

Medical Uses of Chaulmoogra

The chaulmoogra products were furthered refined into oral, topical, and parenteral forms. But all reports indicate that the best treatment was with parenteral chaulmoogra, usually injected subcutaneously. Treatment called for 15cc of oil to be injected, twice weekly, for multiple 10-week courses until the disease was cured or went into remission.²² It was a painful regimen and a survey of patients showed that many would prefer to have their disease left untreated than to continue the mandatory therapy.

It was thought that chaulmoogra could indeed cure lepromatous disease and so for more than 50 years, chaulmoogra was hailed as the only effective treatment for HD. Burroughs-Wellcome and Bayer were the largest commercial producers of chaulmoogra and made several products (Alepil, Moogrol, and Antileprol) that were available until the 1940s.

Pharmacology

The mechanism of action of chaulmoogra is not known. A theory proposed in the 1930s suggested that chaulmoogra activated host lipases that subsequently destroyed all foreign lipids, including both the chaulmoogra oil and the lipophilic cell wall of the Hansen's bacillus. The other theory invoked counter-irritation, a sort of chemotaxis in which the irritation caused by the injections drew phagocytes toward the lepra bacilli.²² In truth, we simply don't know whether chaulmoogra had any effect whatsoever on HD. No proper therapeutic trial with chaulmoogra was ever conducted.

In the 1940s, sulfones (such as dapson) were developed and shown successful in the treatment of HD. Still, some proponents of chaulmoogra resisted change. In the 1940s, an article in *Lancet* advocated combination therapy with sulfones and chaulmoogra

Table 1.—Hawaiian Plants Mentioned in text

Common name	Hawaiian name	Linnean binomial	Family
breadfruit	'ulu	<i>Artocarpus altilis</i>	Moraceae
taro	kalo	<i>Colocasia esculenta</i>	Araceae
sweet potato	'uala	<i>Ipomea batatas</i>	Convolvulaceae
coconut	niu	<i>Cocos nucifera</i>	Arecaceae
banana	mai'a	<i>Musa paradisiaca</i>	Musaceae
sugarcane	kō	<i>Saccharum officinarum</i>	Poaceae
pandanus	hala	<i>Pandanus</i> spp.	Pandanaceae
noni	noni	<i>Morinda citrifolia</i>	Rubiaceae
wild ginger	'awapuhi	<i>Zingiber zerumbet</i>	Zingiberaceae
candlenut	kukui	<i>Aleurites moluccana</i>	Euphorbiaceae
kava	'awa	<i>Piper methysticum</i>	Piperaceae
sea hibiscus	hau	<i>Hibiscus tiliaceus</i>	Malvaceae
sedge	'ahu' awa	<i>Mariscus javanicus</i>	Cyperaceae
wormwood	'ahinahina	<i>Artemisia</i> spp.	Asteraceae

because their properties were viewed as complementary.²³ Nevertheless, the U.S. Public Health Service declared in 1942 that “the oil has little or no curative value, and its unpleasant side effects probably outweigh any advantage it could possibly offer.”²⁴

And so chaulmoogra, once the standard of care, has been dropped from our formularies and from our memories. In the 1930s, the branch of *Hydnocarpus* was the symbol of the International Congress of Leprology but by the 1950s, better treatments allowed us to abandon chaulmoogra therapy and, more importantly, to abandon the concept of isolating patients in leprosaria.¹⁶

Current Military Interest in Plant-Derived Medicines

The conveners of the conference asked me to include a brief discussion on current American military interest in plant-derived medicines. During the Gulf War, considerable attention was given to plant-derived medications, such as atropine and physostigmine (from *Atropa belladonna* and *Physostigma venenosum*, respectively), that can prevent or reverse the effects of nerve agents. Historians and physicians, however, remind military leaders that the greatest threat to deployed soldiers is disease, not battle injury. The most abruptly debilitating diseases are acute infectious diseases, particularly those that are arthropod borne. Throughout much of the world, mosquito-borne diseases, such as dengue and malaria, hamper military operations. Consequently, the development of antimalarials for both prophylaxis and treatment greatly interests the Department of Defense. The customary therapy for malaria has always been quinine or quinine derivatives, obtained from several members of *Cinchona* in the coffee family, Rubiaceae. The early history of Peruvian bark as an antimalarial and febrifuge is well known. At the beginning of World War II, quinine supplies became a strategic military concern because of the Japanese occupation of the Dutch East Indies, now Indonesia, where much of the world's quinine was produced. During World War II, the War Department

sent botanists the jungles of South America to search for other rubiaceous plants for the fight against malaria. The co-leader of the Department of Economic Warfare's cinchona mission was Ray Fosberg, a botanist trained at University of Hawaii and who later returned to the Pacific to become one of the premier botanists in Hawaii and Micronesia.²⁵

Fortunately, quinine's chemical structure had been known since the work of Pelletier and Caventou in the 1820s. When quinine was scarce, quinine-like products were synthesized and soon several of these were also used in the prevention and treatment of malaria (chloroquine, quinidine, atabrine, primaquine, and mefloquine). In much of the world today, malaria is resistant to chloroquine so many non-quinine products, such as doxycycline, are now used to manage malaria.

Nevertheless, the Army is still interested in plant-derived treatments for malaria. The Walter Reed Army Institute of Research (WRAIR), Division of Experimental Therapeutics, is interested in qinghaosu (or artemisinin), a medicine derived from *Artemisia annua* of the sagebrush genus. Several derivatives of qinghaosu are used widely in China (and experimentally elsewhere) to disrupt the life cycle of the malarial protozoan.²⁶ *Artemisia* has many species in temperate regions of the northern hemisphere but only a few are known to have antimalarial activity. Three members of the genus are native to Hawaii but their antimalarial activity has not been assessed.

Conclusion

The stories of two substances, kava and chaulmoogra, demonstrate the importance of herbal products in both ancient and recent Hawaiian medicine. When the USDA needed someone to obtain chaulmoogra seeds, they turned to a University of Hawaii botanist, Joseph Rock, who could venture successfully in the Pacific Rim. The only place where soils and climate were suitable for chaulmoogra plantations was also in Hawaii. And finally, another member of University of Hawaii, Arthur Dean, developed the extraction technique to enable chaulmoogra to serve as the treatment of choice for leprosy for several decades. Remember that Dean was not simply a staff member at the university, but its president, providing testimony to the level of involvement at this institution. Kava, once poorly known outside the Pacific, is emerging as a widely-used alternative medicine, in great part due to the interest generated in this state. Hawaii, with its agricultural sophistication, salubrious climate, and heritage of accepting plant-derived medicines, will probably continue its role in the transition of plants from traditional use to conventional use.

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Notes of Interest:

The first Western illustration of kava was prepared by Sidney Parkinson, ship's artist on James Cook's first voyage to the Pacific. On this voyage, Cook was sent to Tahiti to observe the transit of Venus, a planetary eclipse, in an attempt by the Astronomer Royal to calculate the distance from the earth to the sun. Other observations were made from stations in South Africa and Greenwich to allow triangulation of the distance.⁶ On Raiatea, near Tahiti, Parkinson prepared a watercolor that, once back in England, was transferred to copper plates which were then stored, nearly forgotten for two centuries, in the archives of the British Museum. Parkinson's 743 illustrations were resurrected in the magnificent work called the *Banks Florilegium*. Only 50 sets of the 34-volume *Florilegium* were printed. University of Hawaii has a copy in the Special Collections of the Hawaii Pacific Reading Room at the Hamilton Library.

Rock described several of his Asian expeditions in articles published in *National Geographic*. Photographs from Rock's Tibetan expeditions were collected in *Lamas, Princes, and Brigands* by Michael Aris, husband of Aung San Su Kyi. Rock's chaulmoogra plantation was in Oahu's Waiahole Valley (best known for the Waiahole Poi Factory). The only remaining chaulmoogra trees (*H. kurzi* and *H. anthelmentica*) in the United States are at the Foster Botanical Gardens in Honolulu.

Military Medicine

Continued from Page 372

for full tuition and a stipend during medical school, and allows for up to 6 weeks of training per year in a Military Medical facility during Medical school. Medical Students thus have the opportunity to visit Military Residency training programs prior to application. Application for first year graduate medical education (internship) training is accomplished through the American Association of Medical Colleges (AAMC) Electronic Residency Application Service (ERAS). Positions are available only for those applicants with a HPSP or USUHS obligation. The Military "match" program takes place earlier than the civilian match. In early December the positions are matched with the applications, similarly to the Civilian process. Announcements are made in late December or January. Military bound fourth year students have "matched" months earlier than their civilian classmates. They generally have a much more relaxed spring semester!

While the curriculum in Military GME programs is based upon the standards and requirements of the ACGME, there are additional curricular topics which have been termed a "Military Unique Curriculum" These topics are topics which are of special importance to the Military Physician. Some such topics may be indeed unique (e.g. management of radiation injuries, and aerospace medicine), and others may be included in standard residency curriculums yet require special emphasis (e.g. tropical medicine and wound management). The curriculum development process for Military residencies includes a number of common Military Medicine topics for all disciplines. Included are the Advanced Trauma Life Support (ATLS) course and ACLS. Integrated into the routine residency training are topics such as medical management of burns, infectious diarrhea, trauma surgery, transfusion medicine, and sexually transmitted diseases. There is special emphasis placed on some such subjects, and focused intensive training through specialized courses is provided in Chemical and Bio-

logical casualty management, and Tropical Medicine. Other specialized courses in Aviation Medicine, Diving Medicine, Environmental Medicine, and Hyperbaric Medicine are taught during residency, or after primary residency training is completed. Other topics which are of particular importance to all Military physicians include heat and cold injuries, post-operative care, closed head injury, altitude related illness, disaster medicine, and vaccination strategies for deployment.

The development of a specialized residency curriculum in Military Medicine is an ongoing project which includes field experiences in addition to the didactic and clinically based experiences. The important concepts of public health and field hygiene are learned through didactic sessions and opportunities to participate in training exercises, medical relief missions, and formal military field training courses. Residents from Tripler Army Medical Center have participated in field experiences in Micronesia, Mongolia, Japan, Samoa, and in the Mainland U.S. Residents routinely participate in the Aeromedical Evacuation of patients to and from Hawaii. The combination of didactic training and operational experience give the Military Resident an enhanced knowledge of Militarily relevant medical issues, and a singular knowledge of Militarily unique topics. The practice of medicine in the Military is geographically dispersed. The medical conditions encountered may be particular to geography, occupation, or battle. The training of Military physicians must encompass the spectrum of diseases and management strategies that are common to all practice environments, in addition to those aspects of practice which are unique to the Military practice. The U.S. Army GME system is in the process of defining and implementing a Military Unique Curriculum, which will serve to assure that Military Physicians are trained for the practice environment that lies ahead.

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141st HMA Annual Meeting

October/November 1997 Hilton Waikoloa, Island of Hawaii

House of Delegates

Attendees

Speaker of the House: *Dr H. K.W. Chinn*

Vice-Speaker of the House: *Dr P. Blanchette*

Officers: *Dr J. Spangler*, President

Dr L. Howard, President-elect

Dr R. Kimura, Secretary

Dr C. Kelley, Treasurer

Dr C. Lehman, Immediate Past President

Component Society Presidents:

Dr W. Dang, Jr. - Honolulu

Dr L. Sonoda-Fogel - Hawaii

Dr A. Bairos - West Hawaii

Dr G. McKenna - Kauai

Councilors:

Drs T. Au, P. Chinn, C. Goto, R. Hollison, C.

Kadooka, B. LeeLoy, M. Shirasu, R. Stevens, J.

Weisul, R. Wong

Delegates: *Drs E. Adams, B. Aznan, E. Bade, L. Buencosejo, M. Cheong, K. Durante, D. Fu, E. Gutteling, K. Hara, M. Hefley, P. Hellreich, W. Hoskinson, M. Jackson, S. Kemble, C. King, H. Lim, E. Magnier, T. Magoun, W. McKenzie, C. Miura, G. Pang, P. Pang, C. Nip-Sakamoto, B. Shitamoto, D. Parsa, H. Percy, A. Siu, T. Smith, L. Tom*

Delegates to AMA:

Drs Calvin Kam and Allan Kunimoto

Alternate Delegates to AMA:

Drs F. C. Holschuh and S. Wallach

Resident Physician Delegate: *Dr S. Baker*

Medical Student Delegate: *W. Hara*

Past Presidents:

Drs J. Chang, H.Y.H. Chinn, A. Don, J. Lowrey, J. Lumeng, J. McDonnell, R. Stodd, S. Uehara

Guests: *Yank D. Coble MD, AMA Trustee; Robert Hertzka MD., AMPAC Board Member; Mr. Kinn Elliott, AMPAC Regional Administrator; Masahiko Kuwabara MD, Permanent Board Member of Hiroshima Prefectural Medical Association; Yoshinori Takashima MD, Vice-President of Hiroshima Prefectural Medical Association; Mr. Mitchell Nvorak, AMA Medical Society Relations Representative of Hawaii.*

HMA Staff

J. Won, N. Jones, B. Kendro, H. Singh, J. Asato, P. Kawamoto, D. Shiraishi, N. Yamamoto, A. Rogness - recording secretary.

In Memoriam

Colleagues Deceased since the 1996 House of Delegates

Edward Emura MD

Thomas Frissell MD

Samuel Haraguchi MD

Robert Nordyke MD

Pauline Stiit MD

Ralph Suetsugu MD

Irvin Tilden MD

Rudolph Wiperman MD

Warren Wong MD

Doris Yee MD

Allan Young MD

Elected Officers

President: *Len Howard MD*

President-elect: *Patricia Chinn, MD*

Treasurer: *Charles Kelley MD*

AMA Delegate: *Calvin Kam MD*

Alternate AMA Delegates: *Drs Frederick C. Holschuh, and Stephen Wallach*

Speaker of the House:

Herbert K.W. Chinn MD

Vice-Speaker of the House: *Peter Kim MD*

Young Physician Delegate:

Gregory Caputy MD

Resident Physician delegate: *Sherri Baker MD*

Medical Student Delegate: *Wendy Hara*

Maui Councilor: *Milton Yolles MD*

Kauai Councilor: *Gerald McKenna MD*

Hawaii Councilor: *Edwin Montell MD*

West Hawaii Councilor: *Blase LeeLoy MD*

Honolulu: *Drs Bo Ekloff, Philip Hellreich, Ronald Kienitz, William McKenzie, Stanley Saiki, Jr., Michael Sia, Charlie Sonido, Walter Young.*

HMA Nominating Committee

Kauai: *Gerald McKenna MD*

Maui: *Russell Stodd MD*

Hawaii: *Edward Gutteling MD*

West Hawaii: *Blase LeeLoy MD*

Honolulu: *Drs Lee Buenconsejo, Herbert K.W. Chinn, John Houk, Carl Lehman, David Saito.*

Past Presidents: *Drs Jeanette Chang and Stephen Wallach*

Sports Awards

Golf Tournament Winners:

Low Bross, *Barry Shitamoto MD*

Low Net, *William Dang, Sr. MD*

Tennis Tournament:

Champions: *Diane Nagasaki MD, Robert Meierdiercks*

Finalists: *Norberto Baysa MD, Esperanza DeLeon*

Table-Top Tennis Tournament:

Winner: *Robert Rowe MD*

Halloween Contest Winners

HMA: 1st place, Uncle Sam & Lady Liberty (*Dr and Mrs Fred Holschuh*)

2nd place, (tie) Homeless lady (*Dr Myron Shirasu*) Friends of Pooh Corner (*the Physicians Exchange*)

3rd Place, Santa Pumpkin Clause (*Dr Roger Kimura*)

MSRH: 1st place, Family - the Dalmation Family (*Lorna Perez-Janssen Pharmaceutical*)

2nd place, Individual - The Ideal Patient (*Dean Maeva-Forest Pharmaceuticals*)

3rd place, Carmen Miranda - *Lisa Armenio (UCB Pharma)*

Booth Decorating

1st place, *Astra-Merck (The Lost World)*

2nd place, (tie) *Abbot Laboratories (H. Pylori & bugs) Parke-Davis Co. (Reps in Black)*

3rd place, *Searle Labs (Rastafarians)*

Primary Care Update

Highlights of the HMA Scientific Session

Elizabeth M. Adams MD

Myron Shirasu and his committee again produced an excellent program. This year there were concurrent sessions on Friday and Saturday mornings, making it impossible for one person to attend them all. Where I was not present at a talk I have relied on the speaker's handouts and the comments of those who did attend in preparing this summary.

On Friday, October 31, Dr Laurie K.S. Tom's topic was the treatment of type 2 diabetes. Close control of glycemia reduces complications. When diet, exercise and weight reduction do not adequately control glucose levels other measures are necessary. The options are oral agents, insulin, or a combination of the two. Dr Tom then discussed the use of three relatively new oral agents: biguanides, alpha glucosidase inhibitors and thiazolidinediones.

Dr Michael Kusaka's topic was travel medicine. He discussed the treatment of traveler's diarrhea; malaria prophylaxis; routine immunizations for measles, mumps and rubella, polio, influenza, pneumococcal infections, and tetanus and diphtheria; and immunization for yellow fever, hepatitis A and B, Japanese encephalitis, rabies, typhoid, meningococcal infections, and when and where these are recommended.

Dr Michael Moore (Bowman Gray School of Medicine) gave two presentations. In the first, "Strategies to Improve Cardiovascular Health in Hawaii", he discussed the need to treat hypertension aggressively, to reduce obesity, chronic alcohol use, and fat and sodium intake.

In his second talk Dr Moore discussed the evaluation and treatment of hematuria and albuminuria in children. One should be concerned if there are more than 3 rbc/hpf. Management will vary with the cause, which will vary with the age of the child. Persistent proteinuria, in the absence of infection, indicates glomerular disease. Nephrotic proteinuria, is treated with prednisone.

Dr Carla Nip-Sakamoto discussed common dermatologic problems in children. The risk of melanoma developing in a small or intermediate (<20 cm.) congenital melanocytic nevus is 1-5%. However with a giant congenital nevus the risk is 5-12%, with 60% of the melanomas occurring in the first ten years of life. The smaller nevi should be removed before puberty, but the larger ones at 3-6 months of age. 2% of malignant melanomas occur before age 20, 30% of these arising in giant melanocytic nevi. Dr Nip-Sakamoto then described various types of atopic dermatitis and their treatment, and classification and treatment of acne vulgaris, types of alopecia, and new therapeutic agents.

Dr Gregory Chow discussed childhood and adolescent orthopedic problems.

Dr John McDonnell's topic was adolescent smoking, which is

increasing after declining for several years. He described the ploys which tobacco companies use to lure children and teens to smoke, the adverse effects of smoking (pulmonary and cardiovascular disease, increased risk of lung, laryngeal, oral and other cancers, and other conditions). Addiction to nicotine occurs early and it is then very difficult to quit. Smoking kills more people every year than alcohol and other drugs, car accidents, suicides, AIDS, homicides and fires combined. Exposure to environmental tobacco smoke carries risks similar to those of active smoking. Smoking during pregnancy increases the risk of miscarriage, fetal death, and low birth weight infants. Although the risks of smoking are well known, many physicians do not advise their patients to stop nor offer assistance with quitting. Since most smokers begin the habit in childhood and adolescence increased efforts to curtail juvenile smoking are urgently needed.

Saturday morning's program began with Dr Naoki C.S. Tsai discussing "The ABC's of Hepatitis".

Hepatitis A accounts for 45% of acute viral hepatitis in the US, hepatitis B for 35% of acute viral hepatitis and 25% of chronic, and hepatitis C for 17% of acute and 45% of chronic cases. There is no specific treatment for hepatitis A, but most recover. A vaccine is available for those at increased risk (travelers to endemic areas, the elderly, etc.). Acute hepatitis B is usually not fatal. Chronic hepatitis B may result in cirrhosis or hepatic cancer. Hepatitis B is vaccine-preventable. Hepatitis C virus mutates quickly; only 10-15% recover from the acute infection; in 85% infection persists and may be benign or progress to cirrhosis or cancer eventually. Both B and C virus infections are treated with interferon.

Next Dr Robert B. Baron discussed the treatment of hypercholesterolemia. Men should be screened starting at 45 and women at 55. Both LDL and HDL should be determined. Triglycerides are not an independent risk factor for CHD. Treatment should begin with diet and exercise, and drug therapy reserved for those at high risk of CHD. Those over age 75 should not be treated if there is no evidence of CHD yet. Dr Baron then described the various drugs which can be used and the indications for them.

In a second presentation Dr Baron discussed the treatment of obesity. One third of adults in the US are obese (more than 20% above desirable weight). With dietary treatment 20% will achieve and maintain a 20 lb. weight loss; only 5% will lose 40 lb. and maintain it. Body Mass Index is more important than body fat. BMI over 40 = morbid obesity. Prevention of obesity is more effective than treatment. People lose weight with very low calorie diets and exercise but this usually doesn't last. The only predictor of success in maintaining weight loss is continuing exercise. The goal is to lose

fat, not muscle. Resistance training preserves muscle mass. Fenfluramine and dexfenfluramine are now off the market because of their association with cardiac valvular disease. Some new drugs are being tested but not yet approved.

In the concurrent session on Women's health issues, Dr Edwin Gramlich described premenstrual syndrome of which about 75% of women have symptoms during their reproductive years and various options for treatment: life-style changes (diet, exercise, stress reduction), and possible use of SSRIs when symptoms are severe.

Next Dr Ken Arakawa discussed the prevention and treatment of osteoporosis. Osteoporosis occurs in men but is much more common in women. All postmenopausal women should have bone density checked. Vertebral fractures usually occur earlier than hip fractures and result in loss of height and deformity and pain. Hip fractures result in 20% excess mortality in the first year. 50% never recover fully. Management includes analgesics for pain, weight-bearing exercise, prevention of falls, use of calcium and vitamin D. Estrogens can be started 10-20 years post-menopause but must be continued forever, but there may be an increased risk of breast cancer. Calcitonin may be used with calcium and vitamin D. Bisphosphonates prevent bone resorption; the newest of these, alendronate (fosamax) has been approved by FDA for osteoporosis.

Dr Alan R. Katz's topic was sexually transmitted diseases in Hawaii. Chlamydia is most common both here and nationally. Gonorrhea, AIDS and hepatitis B come next locally. Hawaii has very little syphilis now. Chlamydia is treated with doxycycline or azithromycin (erythromycin if pregnant), and gonococcal infections with cephalosporins.

Dr David Amberger's topic was human papillomavirus and neoplasms of the cervix. Various subtypes of the virus are implicated in different neoplasms; adenocarcinoma, invasive squamous cell carcinoma, small cell carcinoma, and condylomata. The highest incidence of infection with human papilloma virus is in young women, the risk decreasing after age 30. Other risk factors for cervical cancers are coexisting genital infections, early intercourse, having numerous sex partners, and smoking. 20% of pap smears initially reported negative have abnormal cells on rescreening, usually atypical squamous cells. 4500 women die of cervical cancer every year; of these 1/3 have had negative pap smears in the previous 5 years.

Dr Merle Miura-Akamine discussed chronic pain management in a managed care setting, focussing on the Kaiser Spine Clinic model. Initial focus is on educating primary care physicians to manage pain. Pain should be prevented if possible and treated early when it occurs. It is important not to undermedicate. Meds used are NSAIDs, narcotics, antidepressants, muscle relaxants and anticonvulsants. It is better to dose around the clock, avoiding peaks and troughs of blood levels. Injections, if necessary, are best in the acute phase. Rest should be limited and early return to activity encouraged. Exercises, walking, pool therapy may be important. If these measures are not sufficient referral to physiatry spine clinic is indicated.

Next Dr Bruce Katsura discussed stroke rehabilitation and the long term sequelae of stroke. Rehab encompasses prevention of comorbid illness and medical complications, training for maximal functional independence, and facilitating psychosocial coping. He described common impairments after stroke and their frequency, stages in recovery from hemiplegia and predictors of outcome, and

typical functional outcomes.

Kathleen Brown, PhD, spoke on the treatment and management of dementia. The type of intervention is determined by the severity of the impairment of brain function and which functions are lost. Common concomitants of dementia are depression, delirium, anxiety, agitation, restlessness, sleep disturbances, hallucinations and delusions, apathy and withdrawal. Family caregivers need to be educated in management of these problems. Some dementias are reversible: those due to emotional disturbance, metabolic disorders, eye and ear disorders, nutritional disorders, tumors, trauma, and infections.

Dr Richard I. Tsou discussed the evaluation and management of urinary incontinence in adults, which affects 15-30% of those over 60, women twice as often as men. Patients should be referred to a specialist if the diagnosis and management are unclear, if there is no response to treatment trial, if there is hematuria without infection, recurrent urinary tract infections, severe urinary retention, pelvic prolapse or prostate nodule.

Sunday morning's program dealt with end-of-life issues. Dr Yank Coble, AMA Trustee, presented the AMA position in opposition to physician-assisted suicide. Patients should be encouraged to make advance directives. Pain management and use of hospice are important.

Andi van der Voort, RN, discussed the Hemlock Society's view that patients should have a right to ask for help in dying and that it is not humane to refuse. She supports enactment of a law which would allow the physician, after the patient has submitted a written request 3 times within a 15 day period, to prescribe a lethal oral dose of barbiturate which the patient could fill and use when he chooses.

Pat Kalua, RN, talked about hospice programs which offer palliative, not curative, care in a facility or in the patient's home. Patient and family, as a unit, are provided care and emotional support. Dying can be a good experience. The most common fears of dying patients are of pain, dependency, and the unknown.

Next Dr Max Botticelli discussed the physician's role in the care of the dying patient. The physician can help the patient define goals for the remainder of his life and make rational decisions. Most patients do not have living wills. Living wills are usually too vague to be helpful and they do not protect the patient from unnecessary care in ER or hospital. It would be dangerous to rely on patient requests to die; physicians, including psychiatrists, are not good at determining the competency of depressed patients. Emphasis should be on control of pain, not possible side effects of adequate pain control, and avoidance of unnecessary treatment.

Dr Reginald Ho moderated a panel discussion with these four presenters. One point which was made is that the local drug enforcement unit in Hawaii understands the use of large doses of narcotics in controlling the pain of terminally ill patients and will not prosecute physicians unreasonably.



1997 HMA Annual Meeting and Presidential Inauguration

Saturday, November 1, Waikoloa Village Resort

Row 1.—(left to right) Welcome to new HMA president Leonard Howard, MD. Dr. Howard was given the oath of office by Yank Coble, MD, member of the AMA Board of Trustees from Jacksonville, Florida. Dr. Bernard Scherman, and Dr. Stephen J. Wallach congratulate Dr. Frederick C. Holschuh (center), HMA's Physician of the Year for outstanding community service.

Row 2.—Dr. Herbert K.W. Chinn hands sister Dr. Patricia Chinn, president-elect, their father's gavel from 1971 when Dr. Herbert Y.H. Chinn served as president of HMA. Incoming president Len Howard, MD with immediate past president, John Spangler, MD. Dr. Yank Coble, Marilyn Howard, Dr. Len Howard and Dr. Yoshinori Takashima, Vice President, Hiroshima Prefectural Medical Association.

Row 3.—Keiko Kuwabara, Hiroshima Prefectural Medical Association; Karen Shirasu and Dr. Myron Shirasu, chair of the HMA Annual Meeting; HMA past presidents and officers getting ready for the presidential procession: Drs. Fred Holschuh, Andy Don, Jeanette Chang, Chuck Kelley, Roger Kimura, Carl Lehman, Len Howard, and John Spangler.

Row 4.—HMA secretary, Dr. Roger Kimura; Dr. Barry Shitamoto and Dr. Sakae Uehara (past president). Dr. John McDonnell, past president. Dr. Chuck Kelley, newly-elected HMA treasurer. Mrs. Ella (John) Edwards and pianist John Alexander provided entertainment for the inauguration ceremony.



Happy Halloween

October 31, 1997 - Hilton Waikoloa

Row 1.—Carol Lehman (Andy) and Carl Lehman (Ann) in their splendid Halloween costumes. Diane Holschuh and Dr. Fred Holschuh won the costume contest sponsored by the medical service representatives. Dr. Jennifer Kelley (Mrs. Chuck) and daughter carving pumpkins at the Getting Ready for Halloween party.

Row 2.—The first and second pictures are our medical service reps from Hawaii—sorry we didn't get the names of these exhibitors who made Halloween night so fun for all. Noreen Yamamoto and Joella Kawamoto from the HMA staff.

Row 3.—The heifer is Carol Uyeda, with black-eyed pea Heidi Singh and the Nubian slave "Cleo" Becky Kendro from HMA staff. That's Dr. Richard Tsou showing his kids how to carve a pumpkin. Dr. Jeanette Chang and her granddaughters.

Row 4.—Another black-eyed pea with Mrs. Keala Yuen and medical service reps. The "Old Lady" as he called himself is Dr. Myron Shirasu with Kalani Brady's daughter and HMA staffer Jennie Asato.



Life in These Parts

All Stings Considered

(Dr Craig Thomas and Susan Scott; 233 pages, U. of Hawaii Press)

Craig Thomas MD is director of emergency medicine at Wahiawa General Hospital and Susan Scott is a marine biologist who writes the weekly column "Ocean Watch" for the Star-Bulletin. "With the publication of *All Stings Considered*, ignorance is no longer an excuse for having a good time in the ocean. This book is user friendly". (Gregg Ambrose, SB writer)

Doctor's Don't Really Save Lives

John Dempsey Huitt, 70, died on June 28. John was a retired Kaiser pediatrician and a Gideon International member who once wrote in a 1974 Advertiser article: "Doctors don't really save lives; they only extend them for a brief period of time in comparison with eternity. Often they get so involved in extending a life without realizing the need for the patient's eternal life."

New CEO

On August 1, former Tripler Medical Center, chief of staff, **Thomas Driskill**, 52, became CEO for the Hawaii Health Systems Corp (HHSC), the new non-profit organization that takes over management of the 13 community hospitals and medical centers from the state Dept. of Health.

Hope After Stroke

Two new drugs to become available:

HU 23F2G: May be given as late as 12 hours after a stroke. **Marek Mirski**, director of QMC's Neuroscience Institute says if the drug works, 30 to 50% of stroke patients would benefit.

Lubeluzole: to be used at Queens and Pali Momi in tandem with t-PA.

New Procedure for Aortic Aneurysms

Frank Tabrah, Straub physician had a silent aortic aneurysm picked up by a CT scan. In February 1996, he had an experimental minimally invasive vascular procedure done by vascular surgeons **Bo Eklof** and **Elna Masuda** and interventional radiologist **Robert Lipman**. Drs Masuda and Lipman had trained at Sweden's University of Lund with Bo Eklof who reports that 75% of aortic aneurysms will be treated with the new technique in 5 years.

Frank says "I figured it was a good shot." He figured right because he was soon back playing tennis and has never had the slightest problem since. "I was up eating that evening, out of the hospital on the fifth day, and back to work on the 13th."

Hope for Infertile Women

The Pacific In Vitro Fertilization Institute at Kapiolani has launched an egg donation program for infertile women. Co-director **Philip McNamee** explains that the Institute implants donor eggs in infertile women, usually over 35 with ovarian problems caused by cancer surgery, chemotherapy or congenital abnormalities. The pregnancy rate

is 50 to 60%. Donors receive about \$2,000 for their eggs and the invitro procedure costs about \$16,000.

Thomas Huang, the institute's lab director says the donor eggs work well because donors are no older than 32. New research may soon allow older women to inject the contents of donor eggs into their own eggs, thus maintaining a genetic link to the embryo.

The Heptachlor Story

For 15 months (1981 and 1982) the people of Oahu were exposed to high levels of the pesticide heptachlor through milk products (because of a glitch in processing cow's feed). The good news is that no early serious ill effects have been detected. The final word about delayed effects is not out. (There is guarded optimism since environmental toxins take years to reveal their effects).

Hawaii subjects carry less heptachlor than residents of Arkansas, N. Carolina, and other southeast areas where pesticide was widely used.

The Foundation will focus on possible long-term effects, notably on immunological, reproductive and neuro-behavioral systems.

(Message from Willis Butler, president of the Hawaii Heptachlor Foundation).

Medivac Choppers

In a unique partnership since 1974 (after the Vietnam War), the Army has saved Hawaii taxpayers an estimated more than \$4 million and thousands of lives by providing emergency helicopter medical and rescue services. In the past 23 years, the MAST program has performed 4,572 civilian missions and flown 4,886 hours.

MAST

Unit: 68th Medical Detachment
Helicopters: Six UH 60 Black Hawks
Missions: 4,548
Patients: 5,686
On Call: 24 hrs/d 7d/wk
Response time: 10-15 minutes

Physician Moves

May: **Cesar B. deJesus** announced his retirement effective June 1.

July: Dermatologist **Timothy Hagino** opened his private practice at Kapiolani Medical Center at Pali Momi, Ste 480.

October: **Robert Hollison Jr.** and his University Family Medical Clinic affiliated with Straub Clinic. The clinic has been renamed the Straub Manoa Family Health Center and Bob remains director. **Internist Tyronne Dang and FP Jennifer Frank** relocated to Artesian Plaza, 1907 S. Beretania St., 5th floor.

November: General and thoracic surgeon and thoracic oncologist **Paul Morris** opened his practice at Queen's POB II, Ste. 107.

Hors de Combat

Good, Bad, or Both:

A study by teams from UCLA, USC and Rand Corp. have found that Medicare patients in man-

aged care plans are only half as likely to have cataract surgery as those in traditional fee-for-service plans. (About 1.4 million cataract surgeries are performed in the U.S. each year, representing the largest single expenditure by Medicare. More than half of all American over age 65 have cataracts and unoperated cataracts remain a leading cause of blindness).

Previous studies comparing managed care and traditional care have shown that HMO's reduce cost by restricting access to expensive surgery. **Jonathan Javit** of the Cleveland Clinic says, "The most important conclusion to draw is that managed care has the ability to alter healthcare delivery patterns. It may be good, it may be bad or it may be both."

Balance-Billing Law

In June, AMA president **Daniel H. Johnson Jr.** said, "the government does not seem to have any interest in solving the Medicare cost problem." The 475 member AMA House of Delegates passed a resolution saying, they would declare the reimbursement system "unworkable and intolerable" and would lobby for a "balance-billing law" if the doctors don't get relief from fee cuts under proposed Medicare changes. Medicare fees have been cut so many times that for some services, doctors are paid less than what the treatment costs.

Advertiser Editorial re Physician Assisted Suicide (Excerpts therefrom)

"Our view (as stated before) is that this is yet another matter where less state involvement is better than none. Ultimately, as with abortion, it is a decision that should be arrived at between patient and physician, should the state grant such decision making."

"The governor's panel has been holding public hearings around the Islands and will issue its report in time for legislative consideration next year, then it is time for the people of Hawaii to speak out on what course we will take."

Historically: Oregon voters twice approved physician assisted suicide but the Federal government warned that MD's risk license suspension.

June 1996: The Supreme Court ruled: "There is no constitutional right to die" thus passing the issue back to the States.

Justice Rehnquist wrote: "Throughout the nation, Americans are engaged in an earnest and profound debate about the morality, legality and practicality of physician-assisted suicide. Our holding permits this debate to continue, as it should in a democratic society."

Medical Tidbits

A recent study by **Robert H. Knopp**, U. of Washington School of Medicine professor and director of the Northwest Lipid Research Clinic reveals that moderate-fat diets are just as effective as ultra low fat diets in reducing high cholesterol levels in men. The Seattle study involved 444 male employees of the Boeing Co. who had elevated LDL's (*JAMA Nov. '77*)

Question: Does glucosamine work on cartilage and joint problems?

Answer: Recently the Medical Letter, a very conservative professional journal reports that oral glucosamine sulfate has a beneficial effect on inflammation, mechanical arthritis and immunological reactive arthritis. And might be effective in short term use for arthritis pain. It cautioned that the purity of the preparations available commercially has not been established. (*Dr Fitness - Chet Nirenberg*).

Conference Notes

Update on Oral Contraceptives
Notes from *Thomas Kosasa's* Lecture to primary care physicians at Kyoya, Nov. 6

Historical:

Medline has 17,000 papers on OC's since 1966. WHO goals: Maximize contraception and minimize side effects. There has been a steady decline in estrogen dosage from 150mcg to 20 mcg. Reduction in progesterone has lowered the risk of strokes and thromboembolic events. OC's are over the counter in Europe. US will follow.

re Progesterone: 1st and 2nd generations:

1st generation: caused hirsutism, other androgenic effects; and weight gain. 2nd generation: even clears acne.

OC's:

- Reduced endometrial CA by 50%

- Reduced ovarian Ca 40 to 80%
- Reduces ectopic pregnancies
- Reduces PID's
(1 million cases/yr to 250,000 cases)
- Reduces loss of bone density
- Reduces acne and weight gain

OC and Disease states:

- OC in diabetics: prevents vascular complications.
- OC in cardiovascular disease:
Not contraindicated; compatible in HTN
- OC in coagulation disorders.
Not contraindicated
- OC in SLE. Not contraindicated
- OC and breast Ca: No increase in breast Ca with OC; but OC contraindicated in personal history of breast Ca.

Smoking and OC: Relative risk of MI

- Smoking/and OC: +30.0%
- Smoking/no OC: +8.7%
- OC/no smoking: +1.1%

Environmental Hazards

A city circuit court jury had awarded \$3.5 million to a retired Bethlehem Steel Corp worker who was exposed to asbestos and his wife.

(*Baltimore Sun*)

The Pope and President Clinton died within minutes of each other. Through some computer glitch, the President arrived at the Pearly Gates and the Pope ended up in Hell. It took 24-hours for the error to be corrected. When the Pope finally arrived at the Pearly Gates, he asked to see the Virgin Mary. St. Peter remorsefully reported, "Sorry Pope, but you are 24-hours too late."

As told by our favorite humorist John Spangler

Miscellany

Ron Lichter's Favorite:

A OB-Gyn man tired of the hassle with HMO's retired early. His hobby was tinkering with cars, so he enrolled in an automotive repair school. At the end of the first semester, the instructor gave him a 150% score for engine repair. He was happy with his grade, but puzzled. The instructor explained, "I gave you 50% for taking the engine apart and another 50% for reassembling the engine. I gave you a final 50% for reassembling the engine through the muffler."

Poem—

Transformation

Suited white, badged, freshly squeezed,
He enters a ward, smiling bright, MD
His hair recedes, sinewed forehead bulges,
Shining, well polished, well used.
Shaken to rest, badge removed,
He looks up at fresh badges and pursuit.
Confounded, he smiles.

Anand Pathak, Harvard Univ.

Classified Notices

To place a classified notice:

HMA members.—Please send a signed and type-written ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in HMJ as space is available.

Nonmembers.—Please call 536-7702 for a non-member form. Rates are \$1.50 a word with a minimum of 20 words or \$30. Not commissionable. Payment must accompany written order.

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Volunteer Training with Hospice Hawaii.—20-hr course at Hospice Hawaii office. **March:** Wed, March 18, 6 to 10 pm. Sat., March 21, 8 am to 5 pm. Sat. March 28, 8 am to 5 pm. **June:** Wednesday, June 17, 6 to 10 pm. Sat., June 20, 8 am to 5 pm. Sat., June 27, 8 am to 5 pm. For more information call 924-9255 ext. 219. Weekday volunteers are especially needed.

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Managed care sucks—There is no limit to how bad it can get.

The recent attempt by Hawaii Medical Service Association (HMSA) to force a frightful contract onto participating physicians was a flagrant effort to micro-manage medical care, override physician decisions, increase physician liability, neglect due process, and oblige acceptance of a handbook which HMSA could modify at will. The Hawaii Coalition for Medical Care, the Hawaii Medical Association, and the Hawaii Federation of Physicians and Dentists combined to alert the media and demand recall of the egregious document. A HMSA spokesman stated that the contract was only for discussion; an incredible explanation in view of the written threat that doctors must sign by January 1, 1998, or be decertified. Hats off and a resounding mahalo to pediatrician Arleen Myers MD who spearheaded the Coalition and provided the spark to ignite the joint effort. The lesson for organized medicine is that third parties who plan manipulative or abusive modifications in medical care, rarely respond to physicians' complaints, but react promptly when the media and public become informed. It is all too obvious that doctors must speak together, speak loudly, and speak to the public.

It ain't braggin' if you can do it. Dizzy Dean.

What effect will the KeraVision Ring have on laser refractive surgery once the procedure is approved and marketed? A relatively inexpensive device for moderate degrees of myopia which produces reversible changes when the ring is removed, could have a major impact on high tech operations requiring expensive, complex lasers. Presumably, the ring can be inserted in any surgical setting. European investigations and U.S. phase II clinical studies are parallel with 97% achieving at least 20/40 acuity, and 47% of 113 patients had better than 20/20 vision. Present studies are limited to 3.5 diopters of refractive error with plans in phase III to go to 5 diopters.

I'm in favor of letting the status quo stay just as it is.

Legislators in Illinois recently attempted to provide the public with information on physicians' malpractice and disciplinary histories. The bill would have made information available via a toll-free number. The current law allows such data for the confidential use of the state's medical disciplinary board. The Illinois State Medical Society argued successfully that such a change would strip them of their confidentiality protections. Meanwhile, in Florida similar information went on the World Wide Web where some 5,300 downloads and 1,000 phone calls occurred in the first two days alone. Obviously, public interest is high, so our Hawaii Medical Association must keep a watchful eye on any similar proposals at the Legislature.

The difference between genius and stupidity is that genius has limits.

While the media is joyously dancing around the nursery of the seven McCaughey newborns, (sensational news has been slow since the death of Diana) one has to wonder about the societal ethics of artificially generated multiple births in this obviously crowded world. The mother already had one child. Now we are graced with heartwarming daily stories of community largesse, including everything from a new home to a 12 passenger van, hourly television reports from the newborn intensive care unit, and a father, smiling broadly and talking about the "gifts from God." But wait, you ask, where were the newspeople and all the charitable donations last year when six babies (five survived) were born to a couple of slightly more skin pigmentation? And what about the prospects of retinopathy, mental retardation, and pulmonary disorders in these frail premies? And should we be celebrating?

How good are these compulsory air bags, anyway?

Over one year ago the federal government first proposed that auto owners be allowed to disconnect air bags. In the intervening year, 34 adults and children have been killed by air bags. Almost all of the drivers were short women and many were wearing seat belts, and the same was noted for the children. Safety advocates and the auto industry are pressing to not permit owners to take out their air bags. The argument is that if the people disconnect them, many will die in crashes which they would have survived. When first proposed, the

National Highway Traffic Safety Administration claimed they would cut fatalities by 40%. In fact, available data reveal that the increased safety figure for a belted driver with an air bag is actually 9%. According to NHTSA figures a seat belt cuts the risk of dying by 42%, and an airbag bumps that figure up to only 47%. A study published in *JAMA* claimed that air bags kill more children than they save. Moreover, in the past six years, 49 children and infants have been killed by air bags in low-speed crashes that would otherwise have left them largely unharmed. 10% of front-seat child passengers who died in head-on crashes last year were actually killed by air bags. Therefore, the current rules for crash protection can be summarized as follows:—wear a seat belt—belt children in a rear seat—wrap 4000 lbs of Detroit steel around you—try not to be a short female.

Sometimes your best buys are the ones you don't make.

Five mile per hour crashes are not much, one would think. In controlled testing, the Lincoln Continental had zero dollar damage to the front and \$16 to the rear, but the Mercedes Benz E-420 suffered \$372 to the front and \$1066 in a rear collision test. The Lexus LS 400 front end repair at 5 MPH crash amounted to \$748, so it is apparent that some luxury automakers favor style over crash performance.

To err is human, but when the eraser wears out before the pencil, you are overdoing it.

A mystery has occurred at the U.S. Treasury. Recent evaluation of tax coffers has shown an extra \$46 billion beyond projections. The embarrassed bean counters cannot explain how this money, which largely accounts for the shrinking deficit, ended up in the Treasury! Deficit projections by the Congressional Budget Office (CBO) in March estimated a figure of \$124 billion, which has turned out to be an error of \$101 billion! Supposedly, \$55 billion of the windfall can be explained by a boon from the humming economy and a break from health cost inflation, but that still leaves \$46 billion which the Treasury and the CBO cannot account for. Is this a none-time event or an ongoing increase in revenue? The answer will eventually emerge, possibly next summer, and the hunch is that it is related to the stock market. Back at the White House, the administration is taking bows for the smallest deficit since 1972.

Only change is permanent.

The medical financial crunch is being felt in the big apple where New York Medical Center and Mt. Sinai Medical Center will merge. The two elite institutions were supposed to combine last spring, but efforts have collapsed due to bitter dissent by doctors. The trustees are pressing for the merger, stating that the advantages for the two hospitals are undeniable. The hostility generates from the passions of medical academia. The unity is supposed to involve only the two hospitals, and not the medical schools, but doctors at NYU fear this is the first step toward fusing their cherished medical school as well. They warn that NYU is about to be controlled by the "czar" of Mt. Sinai, Dr Jack Rowe. Trustee Laurence Tisch (once CEO of CBS) says, "Nonsense. There will always be an NYU Medical School." However, the NYU physicians have formed an opposition group, raised \$40,000 and plan to mount a legal campaign. Hell hath no fury like a professor who's tenure is threatened.

A thing of beauty is a joy forever. Keats.

Every surgeon should know that barbers a century ago were much more versatile, and cutting hair was only one function. Many kinds of surgery were performed, and when the barbers finished, they hung blood soaked towels outside on a pole to dry. As the wind whipped the towels dry, they wrapped around the pole producing the striped pole design which remains to this day.

Addenda—

- ❖ Percentage of unplanned teenage pregnancies 60-70%; percentage of unplanned pregnancy in women in their 40's 60-70%.
- ❖ Ye shall know the truth, and the truth shall make you mad.
- ❖ Where do you get virgin wool? From ugly sheep.

Aloha and Keep the faith.—rts ■

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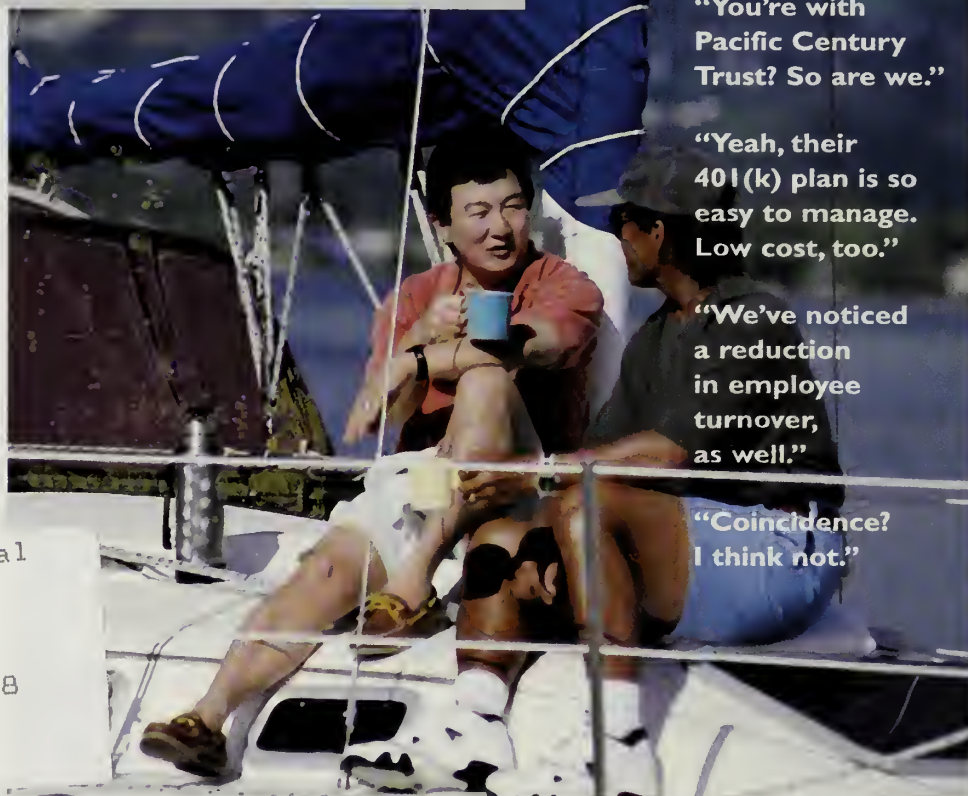
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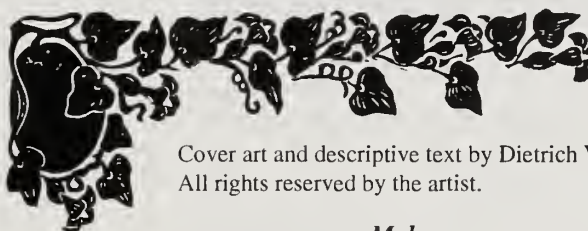
Prenatal Care Utilization in Hawaii: Did it Improve During the Last 16 Years?

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Makoa

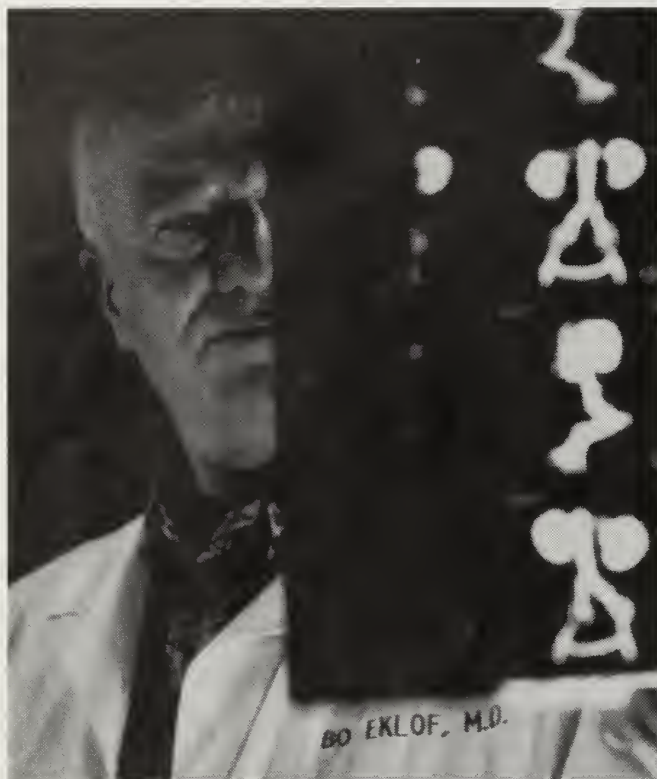
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– Friday Noon Conference –
Tots, Teens and Television

Lynn B. Yanagihara, MD

February 6, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives –

At the conclusion, participants will be able to:

- Understand the influence television media has on children
- Interpret guidelines to make television viewing less harmful for the development of children

Friday Noon Conference – Luncheon

Long Term Management of Gastroesophageal Reflux Disease (GERD)

Philip O. Katz, MD

February 20, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives –

At the conclusion, participants will be able to:

- Understand that GERD is a chronic relapsing condition
- Develop a rational approach to the use of currently available medical therapies for GERD
- Understand the rational approach to the use of currently available medical therapies

We would like to acknowledge the Educational Grant
Astra Merck Pharmaceutical.

Friday Noon Conference – Luncheon

New Treatment Approaches for Allergic Rhinitis

William E. Berger, MD

February 27, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives –

At the conclusion, participants will be able to:

- Discuss how to make the diagnosis of allergic rhinitis.
- Understand new treatment options.
- Review of antihistamines.

We would like to acknowledge the Educational Grant
Hoechst Marion Roussel.

Friday Noon Conference – Luncheon

Hepatitis C: 1998

Willis C. Maddrey, MD

March 6, 1998, 12:30 - 1:30 p.m. – Doctors Dining Room

Learning Objectives –

At the conclusion, participants will be able to:

- Understand the natural history of chronic hepatitis C viral infection and factors which influence the course in an individual patient.
- Recognize the range of clinical disorders associated with hepatitis C.
- Develop a comprehensive program for the long term management of patients with chronic hepatitis C.

We would like to acknowledge the Educational Grant
Schering Oncology Biotech.

Please call Fran Smith at 522-4471 for more information.



Editorials

Mahalo to Elizabeth M. Adams MD

Norman Goldstein MD
Editor

For members of the Hawaii Medical Association who were not able to attend the 141st Annual Meeting on the Big Island October 30 - November 1, 1997 (and that includes your editor), by all accounts Betty Adams did another superb job reporting the scientific sessions.¹

I still don't understand how she could be at three sessions at the same time, but I am told that she had "cub reporters" helping her.

Betty has been our Annual Meeting reporter for 4 years. Betty was named HMA Physician of the Year for 1997.²

Thanks again, Betty, for synthesizing our Annual Meetings for Journal readers. Please do enlist your "cub reporters" again. We're counting on your help for many years to come.

References:

1. *Haw Med J*, 1998; 1:388-389
2. *HM News*, 1996; 11:1



Presidents Message

Federal Fraud Enforcement Why You Should Have an Effective Compliance Plan

Leonard Howard MD

Physicians and others involved in providing patient care need to be aware of their potential legal liability. No doubt you have read about federal government fraud enforcement activities against hospitals, clinical laboratories, durable medical equipment suppliers, hospices and home health agencies. While enforcement actions to date against physicians have been isolated, physicians and their practices are not immune to enforcement actions. You may feel that because you work for a large medical organization, that they are responsible for the coding process. In speaking with the authorities at the interim AMA meeting about this issue the answer I received was that even though the physician does not personally fill out the Medicare charge form, the physician still holds the legal responsibility for it being done properly, and will be held personally responsible for any charge of fraud or abuse.

That's why your practice needs an effective, comprehensive compliance program. Establishing and maintaining a compliance plan will help you avoid activities that could be attacked under the fraud and abuse laws and ensure that your claims will not be categorized as fraudulent.

The AMA Office of the General Counsel, Health Law Division has prepared a document providing the basic structure that physicians and others may follow for establishing a compliance program that can be incorporated into their practices. We have copies of these documents available. Physicians on Oahu may stop in and pick up a copy. Physicians on the neighbor islands may call and we will mail you a copy.

We consider this an important relevancy issue for the physicians of Hawaii. We encourage you to set up your compliance program as soon as you possibly can.



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Evidence-Based Medicine: Educating Physicians in the Science behind the Art

**Richard Kasuya MD, Paul Bogden MD,
Damon Sakai MD and Patrick Sousa MD
Department of Medicine
John A. Burns School of Medicine
University of Hawaii**

Evidence-based medicine (EBM) is the rational and judicious use of current best evidence from clinical research to care for individual patients. The practice of evidence-based medicine is based on the integration of individual clinical expertise with methodologically sound, clinically relevant published research. The skills relevant to practicing evidence-based medicine include precisely defining a patient problem or clinical question, proficiently searching and critically appraising relevant medical literature to decide whether, and how, to apply this information to the resolution of the clinical question and to future clinical practice. The University of Hawaii John A. Burns School of Medicine has taken a proactive approach in preparing students to practice evidence-based medicine with a curriculum that spans the entire medical education experience.

In their first year of medical school, students are introduced to basic, clinically-relevant statistical concepts. Health care problems in their problem-based learning (PBL) tutorials offer opportunities to learn about issues such as sensitivity, specificity, and characteristics of effective screening tests. The PBL process itself is consistent with the practice of evidence-based medicine, as it relies on identifying focused patient-relevant questions, searching appropriate resources for the answer, and applying this new information to the case in study. This concept is reinforced continuously in the evidence-based medicine curriculum.

In their second year of training, all students participate in evidence-based medicine seminars. Students are required to search independently for medical literature relevant to a clinical problem of their choosing. They appraise the validity of their references based on rules of evidence that are taught in the seminars. Students are also introduced to more sophisticated, clinically-relevant evidence-based medicine concepts such as the principles of epidemiology and biostatistics illustrated by two-by-two tables, likelihood ratios, and number-needed-to-treat.

The third-year of medical education puts additional emphasis on patient care experiences and developing clinical synthesis skills. Students learn to apply directly the concepts of evidence-based medicine to the care of their patients. All students participate in the Evidence-Based Medicine Seminar Series, a weekly seven-session experience developed and implemented by the Department of Medicine. Students review critical appraisal skills, apply these skills to real-life clinical questions on the patients they care for, and learn to

present critically-appraised information to others in the concise and timely manner required by busy ward and clinic services. Several seminar sessions are dedicated to practical, hands-on laboratories which review the evidence related to history and physical examination findings for selected clinical problems. Students completing the seminar series have reported that they were more likely to use medical literature to support their clinical decision-making, to critically-appraise the articles they read, and to search the primary literature available on their patients problems. They also felt that evidence-based medicine was a natural extension of the PBL process into the clinical years of training, and that their use of evidence-based medicine increased their sense of involvement in the clinical decisions made on their patients. Throughout their clerkship, students also have the powerful modeling experience of seeing medical residents and faculty applying evidence-based medicine principles on the hospital wards, in the clinics and in educational conferences.

The fourth-year medical school curriculum accommodates the career-differentiation needs of individual students. As an example, students interested in careers in internal medicine may enroll in a year-long seminar series offered by the Department of Medicine in which evidence-based medicine principles are reinforced and applied over a wide range of topics and educational activities. Prior to graduation, all senior students participate in a workshop entitled "Evidence-Based Medicine Survival Skills for Internship." Important concepts are reviewed and small group, discipline-specific, evidence-based discussions of significant medical literature are held.

The University of Hawaii residency training programs continue to emphasize the practice of evidence-based medicine into the post-graduate residency training experience. Effective, rigorous learning activities are integrated into the curricula of the many of the training programs, including those in internal medicine, pediatrics and family practice residency training. These activities include formal didactic sessions and workshops, ambulatory care morning reports, journal clubs, bedside teaching rounds, and independent research projects which require the thorough, systematic review of available medical literature.

Workshops for interested faculty and community physicians have been held to promote further integration of evidence-based medicine principles into educational activities throughout the community. Workshops for chief residents from the various local residency training programs have focused on the skills and concepts required to teach evidence-based medicine to others, serving as the nidus for extension into a wide range of educational experiences such as journal clubs, morning reports, case conferences and board review sessions.

Evidence-based medicine is a premise central to medical education at that the University of Hawaii John A. Burns School of Medicine. A wide spectrum of activities, each building upon earlier experiences and integrated throughout the four-year M.D. program curriculum, ensures that graduates will incorporate principles of evidence-based medicine into the future of practice of medicine in our community.

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Yes, we have answers.

A Possible Solution to the Cost Explosion of the Emergency Department

Ernest J. Prochazka MD, MPH

Once considered a source of care for major injuries and life-threatening medical conditions, the emergency department has become part primary care physician and part social worker to many Americans. This article looks at the problem of emergency room overutilization and poses some solutions to stem the rising cost of urgent care.

Hospital emergency departments play multiple roles in the American health care system. In recent years, as cost saving measures are becoming more important, emergency departments have become the target of cost evaluation. This puts physicians, traditionally trained to help and to heal, in the difficult position of trying to contain costs while also meeting the medical screening examination and stabilization requirements of EMTALA. This federally mandated requirement imposes penalties up to fifty-thousand dollars for participating hospitals violating these requirements. As managed care is reaching the Hawaiian Islands, the cost-effectiveness of medical services, especially the emergency department, is becoming more and more important.

Once considered a source of care for major injuries and life-threatening medical conditions, the emergency department has become part primary care physician and part social worker to many Americans. As early as the 1950s, it was noted that the number of emergency department visits in the United States was rising dramatically and that many of these visits were for conditions that did not require emergency treatment. Analysts attributed this phenomenon, at least in part, to the ascendancy of hospital-based subspecialists and the dwindling foundation of community-based general practitioners in the United States. More recently, overcrowding of hospital emergency departments in the inner cities has reached desperate proportions.¹ A recently published report of the consequences of over-crowding at the ED at San Francisco General Hospital¹ showed that patients with non-critical conditions faced waiting times as long

as 17 hours, and 15% of the patients left without ever seeing a physician. When contacted 1 to 2 weeks after their emergency department visit, patients who left without seeing a physician were twice as likely as patients who did see a physician to report deterioration of their health status.

Although use of ED for non-emergency conditions has become ubiquitous, this pattern of utilization is especially prominent among patients who are poor, non-white and without a regular source of primary care. In San Francisco, although there is a relatively extensive "safety net" of hospital- and community-based primary care clinics, these facilities have proved insufficient to meet the demand for primary care services. For example, appointment waiting times for patients new to the hospital-based family practice and general medicine clinics at San Francisco General Hospital average 2 months. Although many of the primary care clinics have same-day appointments to accommodate the acute care needs of those who are established clinic patients, such appointments are often unavailable for patients without established clinic relationships.

The problem of public hospital emergency department overcrowding invites a number of possible policy responses. Among these possibilities are augmenting ED resources and/or productivity, expediting transfer to inpatient beds for patients requiring hospitalization, developing urgent care clinics near emergency departments for rapid treatment of low-acuity problems, instituting patient cost-sharing, refusing emergency department services to patients with non-emergency conditions, and allowing the ED queue itself to continue to play a triage^{4,5} role by imposing a high "time price" on patients for the use of the ED. A different approach, however, would be to increase access to alternative primary care services that offer continuity of care for a full spectrum of acute and chronic care needs - in effect, to reverse the trends and to replace emergency room doctors with a large number of family practitioners. This strategy would require a) identification of patients who use the ED for routine health care needs because of barriers to primary care services, b) timely referral of these patients to appointments at primary care facilities, and c) enhancement of the capacity of the primary care system to accommodate additional indigent patients. Increasing access to primary care services as an alternative to the emergency department could potentially reduce public emergency department overcrowding, provide indigent patients a less costly form of care for their immediate needs, and establish a regular source of care for those patients with ongoing health care needs.

For a long time, the cost explosion caused by overutilization of the emergency department has created and still contributes to the cost inflation of the American health care system. Since emergency department (ED) visits generate higher charges than comparable

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visits to physicians, roughly four to five times the cost of an office visit, "inappropriate" use of the ED has been cited as a major contributor to the increasing costs of health care. Americans will visit hospital EDs more than 90 million times this year. Growth in ED visits has been particularly pronounced among Medicaid and Medicare recipients and uninsured patients. Although many patients seek emergency care for problems that are life-threatening, most have less serious conditions. Use of the ED for non-urgent care has become so widespread that it is commonly cited as a major contributor to increasing health care costs.²

Federal reports estimate that between 40% and 55% of all ED visits involve non-urgent problems. Because care of minor illness or injuries in the ED generates greater charges, on average, than comparable care in a physician's office or outpatient clinic, various administrative and financial strategies have been proposed to divert patients from the ED.

While some studies suggest that the marginal cost of non-urgent care in the ED is relatively low,²¹ other studies indicate that the cost of an ED visit is significantly higher than a regular office visit. Because of the problem of allocating fixed costs to specific services, as well as the wide variation of treatment provided in emergency departments, it is difficult to estimate a meaningful cost for emergency services. In a recently published article, Williams² evaluates the cost of visits to EDs in six community hospitals in Michigan, analyzing more than 24,000 patient visits. He concludes that the average charge for an ED visit was \$383, and the majority of ED visits (58%) were classified as non-urgent. This shows clearly that ED visits are roughly four to five times more expensive than office-based physician visits, and this data show that the majority of ED visits are not life threatening.

A possible solution to these rising costs could be to impose stricter and more vigorously exercised "triage" procedures. The word triage is derived from the French verb *trier*, meaning to sort, sift, or cull.³ The first application of "triage" into the concept of medicine was on the military battlefield where triage involved the rapid assessment of the priority in the often-limited medical resources.⁴ Injured soldiers were assigned different priorities for treatment, and implementing this concept into a more vigorous application by limiting the access to the ED could help to decrease the often-inappropriate use of the ED. While access to emergency services as such should not be limited, patients who habitually use ED services for non-urgent problems, should be made aware that sometimes their visit to the ED will not be covered by their health insurance plan. However, these patients should have the option to "still be seen" as patients in another treatment setting. I know that in certain parts of the country, this policy is already being implemented, but I think that a stronger development of this "triage" procedure will prove to be helpful.

The effective management of an emergency department requires an ordering of priority for emergency medical care, and identification of patients who require treatment on a priority basis in an area that cannot practice medicine on a first-come, first-served basis. Consequently, queuing orders based on triage decisions are now routinely made in the evaluation and care of the 96 million patients who visit hospital EDs in the United States each year.⁵ This has been necessitated by the unpredictable arrival of large volumes of patients within a short period of time, variable acuity of medical problems, and limited personnel, equipment, and patient capacity in busy

emergency centers.⁶

To get a more clear understanding of the scope of this problem, I reviewed several recent articles dealing with the inappropriateness of ED use by patients. Gill and Riley⁷ surveyed 268 patients in an urban area. These patients were classified as non-urgent by the ED triage nurse. Using structured interviews, the authors determined patient's perceptions about the urgency of their medical condition, whether they had a regular source of medical care, and the reasons for choosing the ED for care. The authors determined that having a non-regular source of care was associated with patient rated non-urgent utilization. Eighty-two percent of the patients rated their condition as urgent. Patient rated urgency was not associated with having a regular source of care. The most common reason for seeking care in the ED was expediency. Furthermore, the authors concluded that a large majority of ED patients perceived the problems for which they seek care at an ED as urgent even if they are assessed as non-urgent by health care professionals. Lack of regular source of care had no significant impact on ED utilization for problems that patients perceived as non-urgent. Simply providing patients with a regular source of care is unlikely to have a significant impact on non-urgent ED utilization without efforts to manage utilization and ensure adequate access to primary care. This article shows that, especially in urban areas, patients are more likely to seek medical care at an ED because it seems sometimes difficult to get an appointment with a primary care physician, and "after hours" coverage, even in urban areas, is not optimal. The result of this study, indicating that approximately 82% of patients were classified as non-urgent by health care professionals, concurs with my professional experience as an emergency room physician, where I have perceived the majority of cases as non-urgent.

Burnett and Grover⁸ studied 200 patients for non-urgent care during regular business hours. Only five percent of the patients stated that they were in extreme pain. Seventy percent were aware of alternative care options, however, 60% felt that the ED was the best place to receive care. Seventy-seven percent of the patients were referred to the ED by a health care professional (by physician referral, fifty-seven percent). The authors concluded that most patients are aware of alternatives to the emergency department for the care of non-urgent medical problems; nevertheless, a large number of the patients seeking care in the ED during regular business hours are by referral of other health care professionals. Many physicians, especially those with busy private practices, tend to refer patients quite frequently to the ED if the patient presents without an appointment, or after business hours, or with slightly more complex problems than usual. It is interesting that only five percent of the patients studied were in extreme pain, which would justify the visit to the ED, and although seventy percent of the patients were aware of alternative care options, they still choose the ED as a place of choice. It appears that all across the country it has become common perception that the ED is a place to obtain quick and efficient care. Many times this trend is being facilitated by other health care professionals, who see the ED as a place of referral.

Afilalo, et al.⁹ investigated 849 patients according to three different categories of severity of medical condition. Overall they found that 69 % of the patients investigated in this study could have been seen only in the ED, 15% of patients were classified as inappropriate users and should have been seen at an outpatient facility. The

remaining 16% of patients represented "gray-zone" patients and could have been seen in an outpatient clinic or the ED. An interview conducted among the non-urgent cases revealed that the main reasons for choosing the ED were lack of awareness of availability of other facilities, perceived seriousness of the condition, trust in the ED staff, or proximity of the ED. Furthermore, the authors concluded that misusers represent only a small portion of the ED caseload. However, as this study came from McGill University in Montreal, Canada, which is a major tertiary care facility, the study may be more representative of a facility serving a different patient population. In addition, the fact that this study is based from Canada, with an essentially socialized health care system, the surprisingly different outcome of the study may not be applicable to U.S. emergency department usage.

Dales, et al.¹⁰ investigated 448 patients with asthma for recurrent visits to the ED. It is well known that patients with asthma who visit the ED have lost control over their disease, have significant airway obstruction and frequently require admission to the hospital. The authors further investigated patients with at least three visits per year and concluded that "under medication" was apparent in most of these cases. Furthermore, use of the ED correlated with work and school absenteeism, frequent visits to a regular physician, and frequent admissions to the hospital. The researchers found that the visits were not related to psychological health, environmental irritants, and lack of perceived asthma severity. The authors concluded that, apparently, the recommendations of asthma therapy are not reaching the frequent users of the ED for asthma. The findings of this paper indicate that patients with severe asthma frequently require hospitalization not only for more severe disease activity, but also many times for lack of appropriate care.

My review of these studies indicates that while "inappropriate" use of the ED is widespread, for the most part, no viable solutions to the problem, such as the use of triage, were offered. In most instances, triage is performed by an experienced nurse and involves a) obtaining a directed history that focuses on the chief complaint, b) eliciting additional pertinent information on medications and allergies, and c) performing a directed physical assessment with an emphasis on vital signs. Based on these findings, patients are categorized by severity of illness, thus dictating the priority for receiving care, typically as emergency, urgent or non-urgent. Ideally, triage is an efficient and effective tool that ensures that potentially unstable patients are seen rapidly and that those not likely to deteriorate may wait safely to receive care.¹¹⁻¹²

Despite widespread use of triage for decision making in prioritizing patient care, current triage methods have problems with ambulatory patients. Non-urgent emergency visits by ambulatory patients have been implicated as an inappropriate use of limited services and as an important contributor to escalating health care costs both nationally and internationally.^{18,19} In the August 14, 1996 issue of *JAMA*, Young and colleagues¹³ provide additional data on this timely issue from their study of ambulatory patients who presented for emergency care at 56 U.S. hospital EDs during a single 24-hour period. Of 6187 ambulatory patients studied, 45% considered their condition to be urgent or an emergency or felt they were too sick to seek care elsewhere, and 65% cited barriers to receiving care elsewhere. Of 3045 (49%) patients who were assessed by triage nurses as having a non-urgent condition, defined as a problem or

condition that could wait 12 to 24 hours for treatment, 166 were hospitalized directly from the emergency center, representing 5.5% of all non-urgent visits and 13% of all admissions in the study population. The authors speculate that if these data accurately reflect the national experience, as many as 2 million ambulatory patients classified as having non-urgent conditions would require admission to the hospital each year.

Unfortunately, the investigators did not report information on the indications for, or the appropriateness of, admission for patients with non-urgent conditions. Likewise, the study failed to collect data on interventions (e.g., surgical procedures, intensive care monitoring) required during admission or outcomes for patients with non-urgent visits who were discharged after receiving emergency treatment. Disconcertingly, there were no significant differences in either the type or frequency of presenting complaints or the reason for seeking emergency care between admitted patients triaged as non-urgent and those who were deemed medically stable enough to be routed from an emergency center to obtain care elsewhere. This emphasizes the difficulties inherent in the ability of the process to accurately assess patients as to their degree of illness.

Other studies examining the accuracy of the triage process have reported inconsistent results. In a study comparing triage assessments of more than 5000 patients by nurses, physicians, and a computer program, Brillman, et al.¹⁴ identified substantial variability and insufficient sensitivity and specificity among decisions of the three groups in attempting to predict the need for hospitalization. In contrast, Derlet, et al.¹⁵ reported that of 31,000 ambulatory patients who were triaged as having non-urgent conditions, were not treated, and were referred elsewhere for care, less than 1% experienced an adverse outcome. The authors estimated that 39% of patients triaged away received care elsewhere on the same day, 35% received care within three days, and 26% decided not to seek care.

However, Lowe, et al.¹⁶ were unable to validate a set of published triage guidelines for identifying patients who could be referred to other settings. The authors suggested that these triage guidelines were not sufficiently sensitive to identify patients who need ED care and warned that their broad application may jeopardize the health of some patients. Of 106 patients who would have been refused care according to triage criteria, one third had appropriate visits, many required diagnostic or therapeutic intervention, and 4 were hospitalized, suggesting that they needed emergency care. In a study of 216 children who were enrolled in a Medicaid managed care program and for whom authorization for emergency care by telephone triage was denied by the gatekeeping clinician, Gadomsky, et al.¹⁷ reported that no adverse health outcomes occurred because of the delay in care. However, only 123 (57%) of patients denied care were seen by their primary care clinician within 1 week, and children who had been denied authorization for emergency care were subsequently hospitalized at a higher rate than age- and complaint-matched controls selected from those patients who had been treated with non-urgent conditions.

Although clear guidelines for the development of triage procedures are yet to be delineated, the ED remains a major target for cost-cutting efforts by managed care organizations.²⁰ Over 90 percent of health maintenance organizations use primary care physicians as gatekeepers, whose role is to authorize access to specialty, emergency, and hospital care and to diagnostic tests. Gatekeeping has

come to imply the medically limited and bureaucratic function of opening or closing the gate to high-cost medical services. This simplistic view of gatekeeping is controversial, both because it diminishes the physician's professionalism and implies that the physician is an agent of the third party-payer rather than the patient.

Rather than rely on triage by a health care professional to limit access to the ED, some health care providers encourage patients to limit ED use by imposing economic disincentives. The effect of the co-payment on the use of ED was studied on over thirty thousand patients in northern California.²⁰ The studied patients were adjusted for age, sex and socio-economic status, and the introduction of the co-payment of \$25 to \$35 for using the ED, resulted in an approximately 15% decrease of the overall ED visits. The decline in ED visits for conditions classified "always an emergency" was insignificant and very small, whereas the number of ED visits in the patient category "sometimes an emergency" and "not an emergency" was most significant and pronounced. In summary, this article showed that among members of a health maintenance organization, the introduction of a small co-payment for the use of ED was associated with a decline of about 15% in the use of the ED, mostly among patients with conditions considered likely not to present as an emergency.

Other data suggest that the marginal cost of non-urgent care in the ED is relatively low.²¹ Personally, I do not agree with the findings of this article, because my personal experience from California and Hawaii show me that the non-urgent use of the ED significantly contributes to the cost explosion in health care. Currently, lack of triage of ambulatory patients may be viewed as a contributing factor to these purportedly inappropriate and expensive visits. Alternatively, with proper refinement, the triage process may prove to be pivotal in efforts to find solutions for establishing the optimal site of care and safely reducing costs for treatment of ambulatory patients.

Triage protocols have been used in many EDs where patients are evaluated on a dynamic basis in the sight of view of a trained nurse. Hospitals and emergency care centers should critically analyze and carefully evaluate their triage practices and procedures, with goals of improving the accuracy and efficiency of the process, facilitating patient care and flow through the sometimes overburdened system, decreasing patient waiting time, and enhancing patient satisfaction without a decrement in safety or the delivery of necessary care. Managed care organizations and others who use telephone triage should prospectively standardize and objectively validate preauthorization triage protocols before using them to determine the necessity, appropriateness, or timeliness of care.²² Physicians and other health care professionals should, as a part of a total approach to health care, inform and educate patients on the cost-effective use of health care resources, balanced with the desires and rights of patients to obtain timely, affordable care for acute medical problems.

A totally new approach of internists working together with ED doctors was recently published.²³ The Harvard Pilgrim Health Care (HPHC) Program is designed to reduce unnecessary admissions and provide better continuity of care for patients. This emergency room in Boston started in 1994, when officials noticed that ED visits were

rising by ten percent a year, despite a non-changing patient population. At that time, officials were also concerned about lack of physician involvement in the ED evaluations, and subsequently HPHC, in cooperation with Brigham and Women's Hospital in Boston, started to have one of the internists, once a month, work an eight hour shift together with the ED doctors. The internist saw every patient who walked into the ED, and assisted the ED physician in evaluation and discharge planning. Working together with the ED physician, the internist might suggest that the patient be seen at an urgent care center or be admitted directly to an extended care facility, without spending the night at the hospital. All patients continue to be seen by the ED physician, who makes the final decision as to whether the patient should be admitted or not. In this study, a closer cooperation of different specialists in the emergency room, as well as a much more centralized database, significantly decreased cost inflation. The physicians were able to reduce the number of admissions by 20 to 25 patients a month, which translated into a monthly savings of approximately \$40,000.

Ultimately, successful development of innovative approaches and implementation of effective interventions for the long-standing practice of patient care may prove useful in solving some of the existing problems and developing workable solutions for the complex issues related to the management of ambulatory patients.

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Seizures in East-bound Visitors to Hawaii

Michael E. Mullins MD and Monte F. Elias MD

Anecdotal observations by emergency physicians at Straub Clinic and Hospital suggest that first-time seizures are common in Japanese tourists visiting Hawaii. Because such patients seemed to present in the evening of their day of arrival, some physicians have attributed these seizures to sleep deprivation based primarily upon clinical impressions. However, there has been no previous review of these cases to confirm the impression that these seizures have a relatively benign cause. This retrospective study aims to identify the role of sleep deprivation as a potential factor in seizures within this population.

Introduction

Sleep deprivation lowers one's seizure threshold^{1,2} and may be a cause of "idiopathic" seizures. However, many emergency physicians may only infrequently see patients whose seizures are attributable to sleep deprivation. Emergency physicians at Straub Clinic and Hospital have seen seizures occurring somewhat commonly in visiting Japanese tourists, usually on the day of the visitor's arrival in Honolulu. In this clinical setting, sleep deprivation appears the likely precipitating factor in these seizures, but no study has described the relationship of seizures and sleep deprivation in this population or any similar population of travelers.

Most travelers are familiar with jet lag occurring from travel through multiple time zones. Eastward travel is generally more stressful than westward travel. Various studies have demonstrated greater impairments of human performance^{3,4} and greater disruptions of sleep cycles with eastward travel compared to westward travel.

Most East-bound transoceanic flights depart in the evening and arrive in the morning. Throughout this night, already made shorter by crossing multiple time zones in an easterly direction, these

travelers endure several stresses which interfere with normal sleep. These stresses include: sitting in a nearly upright position, noise, unfamiliar surroundings, in-flight movies, in-flight meal and beverage service, alcohol consumed during the flight, and alteration of light-dark cycles. The result is sleep deprivation for most east-bound travelers as most were awake throughout the day of departure and most are active throughout their day of arrival. By the evening of their day of arrival in Honolulu, many of these travelers have been awake for 30-36 hours continuously.

Straub Clinic and Hospital serves as the primary hospital for Waikiki, a heavily visited tourist destination for many travelers from the Far East (especially Japan). Hawaii saw over 2.8 million east-bound arrivals in 1996. Of these, over 2.1 million (75%) were Japanese visitors with a mean length of stay of 5.78 days.⁵

Vacationing Japanese travelers tend to concentrate in Honolulu, by virtue of the geography of the Pacific Basin. Visitors to Honolulu tend to concentrate in Waikiki, by virtue of the fame and the availability of hotel rooms in Waikiki. Waikiki visitors with acute medical problems tend to concentrate at Straub Clinic and Hospital, by virtue of Straub's proximity to Waikiki and ambulance policies requiring transport to the nearest available hospital. Straub Clinic and Hospital, therefore, is in a unique position to study this patient population.

Mainland visitors to Hawaii are more difficult to study on their eastward return trips as they scatter quickly across North America when they return home. Likewise, trans-Atlantic travelers scatter throughout Europe, scatter further throughout the countries they visit, and further scatter to various medical facilities within those countries when an acute medical condition arises. These eastbound travelers are, therefore, nearly impossible to study collectively once they present for medical care. Honolulu, therefore, is a focal point where East-bound travelers concentrate in a manner scarcely seen in other parts of the world.

Methods

We reviewed the Emergency Department registration log for 16 non-consecutive months in 1994, 1995 and 1996 to identify a series of adult patients presenting with a chief complaint of seizure. Inclusion criteria were: East-bound travelers, age 16-65 years, witnessed tonic-clonic seizure, and temperature less than 38 degrees Celsius. Exclusion criteria were: residents of Hawaii, fever on presentation (> 38 degrees Celsius), history of head trauma in previous 2 weeks (if known).

Review of the available ED logs for December 1994, January-December 1995 and April-June 1996 revealed 154 visits for seizure by 148 individuals (6 patients with more than one visit). Of these, 16

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Table 1.—Summary of East-Bound Visitors to Hawaii with Seizures

Patient	Age (years)	Sex	Registration Time (HST)	Prior Seizures	Medications	Drug levels (Valp: 50-100)	CT Scan
1	26	M	1840				Negative
2	19	F	2321				Negative
3	24	F	1650				Negative
4	23	F	1952	Yes ("fatigue")			
5	23	F	2148	Yes	Valproic acid	Valp=10.8	
6	23	F	2136	Yes	Valproic acid	Valp=40.6	
7	27	F	2115		Theophylline, Aspirin	Theo=15.0	Negative
8	28	M	1005	Yes			
9	18	F	1544	Yes ("lack of sleep")			
10	17	F	2233				Negative
11	18	M	2247				Negative
12	22	F	1534	Yes	Valproic acid	Valp=83.9	
13	22	F	0734	Yes	Valproic acid	Valp=32.0	
14	28	F	2130	Yes	Valproic acid, Carbamazepine	not done	
15	25	F	0839		Insulin		
	Mean = 23	12 of 15 F	Mean = 1751	8 with prior seizures	5 on Valproic acid 1 also on Carbamazepine	1 of 5 in Rx range for Valp	6 of 6 Negative

records met the inclusion criteria for further review, and 15 of these 16 records were available for review. Data collected from these records included nationality, age, gender, history of previous seizures, antiepileptic medication, results of non-contrast computed tomography (CT) of the head (if done), and time of registration. Most interviews of patients took place with the assistance of an interpreter.

Results

Table 1 includes the data among the 15 records evaluated. One additional record meeting the review criteria was unavailable.

Mean age was 23 years (range 17-28) among reviewed records. Three were male and 13 were female. All patients were Japanese. Registration time in the ED (with seizures presumably occurring shortly before) peaked in the early evening with a mean registration time of 17:51 hours. Eight of the 15 patients (53%) presented with a seizure occurring on the day of arrival in Hawaii, and eleven (73%) presented within the first 48 hours after arrival. Three records did not mention the interval from arrival to seizure.

Eight patients had a prior history of seizures; of these two gave a history of "fatigue" or "lack of sleep" with their prior seizures. Five patients were taking antiepileptic medication. Four were taking valproic acid, and one was taking both valproic acid and carbamazepine (but admitted non-compliance with her regimen). Only one patient had a serum concentration of valproic acid in the therapeutic range.

No patient reported either recent or remote history of head trauma. Six patients with first-time seizures underwent non-contrast CT scans during the E.D. visit. None showed any acute neurosurgical pathology.

Patient 7 had a prior medical history of pulmonary hypertension and was taking aspirin, theophylline, and several other medications. Her theophylline level was 15.0 mcg/ml, a level at which seizures are uncommon. Her arterial blood gas on 100% O₂ showed pH 6.73, pCO₂ 29, pO₂ 449. Her measured bicarbonate level was 5. No

salicylate level was available, but salicylate toxicity could explain both the seizure and her acid-base abnormalities.

Patient 15 had Type I diabetes mellitus but no prior seizure history. Her seizure occurred in the morning of her second day in Honolulu (registration at 0839 hrs) after taking insulin but before eating. Her initial blood glucose measured 59 mg/dl, and she appeared neurologically normal after paramedic administration of 50% dextrose.

Discussion

The mean time of registration was 1751 (5:51 p.m.) HST, which corresponds to 2151 (9:51 p.m.) in Japan. One might speculate that this reflects a threshold of sleep deprivation for seizures to occur in these recently arrived east-bound travelers. An alternate explanation would be that the peak occurs in the evening because these visitors are more likely to be in Waikiki (and therefore in Straub's catchment area) in the evening while spending the daytime elsewhere on the island nearer other hospitals.

The lack of any abnormal CT scans suggests the relatively benign nature of seizures occurring in young, otherwise healthy people in the setting of sleep deprivation. While emergent CT is not mandatory, neuroimaging remains part of the standard evaluation of a first-time seizure, either during the E.D. visit or in close follow-up.⁶ The problems of difficulty in assuring adequate follow-up in travelers make emergent CT attractive to the clinician.

With 4 out of 5 patients on medication presenting with either subtherapeutic drug levels, non-compliance with medication contributes to the seizures in the patients with known prior seizure disorder. However, sleep deprivation appears to be an exacerbating factor in these seizures as well. Alterations in sleep cycles can change the effectiveness of anticonvulsants.⁷⁻⁹ Also, the abrupt change in time zone may challenge patients' ability to maintain optimum dosing intervals of their medication.

While our inclusion criteria included age up to 65 years, no patient in our series was over 30 years of age. The significance of this is

unclear, but it possibly represents a behavioral difference in younger adults who may be more likely to "burn the candle at both ends" (e.g. working on the day of the flight to Hawaii, staying awake during much of the flight, and trying to meet an ambitious activity schedule on the day of arrival). Other alternative explanations could be either a change in sleep requirements or a change in seizure threshold with increasing age. Another explanation could be that older adults with seizure disorders more carefully maintain their dosing schedules of their anticonvulsants or simply travel less than younger patients.

It is difficult to calculate a useful expected number of seizures in this population of travelers for comparison to the observed number.

Assuming a lifetime seizure risk of approximately 5 percent¹⁰ distributed evenly across a life span of exactly 75 years, the expected incidence of seizures on any given day would be approximately 0.00018 percent. Using the population of over 2.1 million east-bound visitors annually, this translates into a crude estimate of 5.1 seizures occurring the first two days of any visit during the study period (11 observed) and 15 seizures at any time during an average visit (15 observed). Since data collection for this study occurred in only one Emergency Department, any patients presenting at other hospitals would represent excess seizures above the expected number. However, because both the observed and expected numbers are

small, and because the assumptions underlying the calculation of the expected number are tenuous, no useful statistical inference is possible.

The only other study of seizures in travelers is a retrospective study done in children visiting Orlando, Florida.¹¹ The Florida study found that seizures accounted for about 70% of their neurologic admission of out-of-state patients. Out of 36 seizure admissions, 16 were for acute febrile seizures, 13 for first-time seizures (all with normal CT scans), and 7 with prior history of seizure.

A study of acute psychiatric emergencies in visitors to Hawaii demonstrated an asymmetry between east-bound and west-bound travelers; east-bound travelers tended to present with ma-

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nia while west-bound travelers tended to present with depression.¹² Any relationship of these observations to seizures in travelers is open to speculation. However, they do suggest a difference in CNS activity or function depending upon the direction of travel.

This retrospective review of a case series has multiple limitations. The sample size is small, so no statistical inferences are possible, especially with no control population. Without the prospective use of a standard questionnaire, the study relies upon the information deemed relevant by the clinician at the time of evaluation. Therefore, we lack adequate and consistent information on the activities in the 24 hours preceding the apparent seizure including how many hours the patients actually slept, how much alcohol and caffeine they consumed compared to their usual habits, and history of remote or recent head trauma. We also have no data on similar patients who presented to other area hospitals. Although Straub is the closest hospital to Waikiki, The Queen's Medical Center and other hospitals are somewhat nearby and may receive similar patients who arrive during times of ambulance diversion or whose seizures occur elsewhere on the island. The diagnosis of seizure in these patients generally rested upon the description of family, friends, bystanders, or paramedics; the combination of a lay person's concept of a seizure and cultural/language barriers in obtaining history creates some degree of uncertainty in the diagnosis. A future prospective study should include a uniform series of questions in a survey written in both Japanese and English and should involve the participation of other area hospitals.

Perhaps these seizures may be preventable either by educating the traveling public, both arriving visitors from the Orient and visitors returning to the Mainland, on how to change their habits when flying (possibly by taking medication to improve sleep on the flight) or lobbying for change in how airlines treat passengers on long east-bound flights. The U.S. Air Force uses short-acting benzodiazepines for aircrews who must rapidly shift their circadian rhythms to accommodate the demands of rapid deployments or night missions.¹³ However, benzodiazepines are controlled substances requiring a physician's prescription. Inexpensive over-the-counter medications such as diphenhydramine are safe and effective in promoting sleep and could be useful in this setting. Various scientific and lay articles have touted the benefits of melatonin in the amelioration of jet-lag.^{14,15} However, the effectiveness remains unproven, and animal studies have yielded conflicting data on the effect of melatonin on seizure threshold.^{16,17}

Hotels could change their policies to permit early registration for newly arrived east-bound travelers in order to allow them to nap early on the day of arrival. One major hotel chain has recently begun an new advertising campaign indicating that they can now accept check-ins as early as 9 a.m. However, the Hawaiian hotel industry may have difficulty accommodating two million early check-ins per year without considerable additional cost to prevent a relatively small number of seizures.

Conclusions

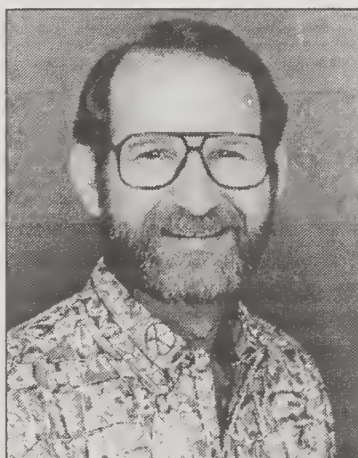
Sleep deprivation and medication non-compliance each appear to have a role in the seizures seen in these young adults. Disruption of normal sleep during east-bound trans-oceanic flight plausibly contributes to these seizures in most of these young adults, both those with known prior seizure disorder and those who were in apparently good general health.

This pilot study raises questions suitable for future study with surveys to provide better data on patient habits, activities, time of arrival in Hawaii, recent use of alcohol and medications, etc. Ideally such a study would involve the participation of other hospitals on Oahu and the Neighbor Islands in order to include data from patients who may seize outside of the Waikiki area and to assess more accurately the magnitude of the problem.

As new flights bring more Japanese visitors directly to the Neighbor Islands, other physicians on Maui and the Big Island may see this clinical problem more frequently.

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Prenatal Care Utilization in Hawaii: Did it Improve During the Last 16 Years?

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This paper examines the utilization of prenatal care in Hawaii from 1979 to 1994 to determine if early and adequate utilization of prenatal care has changed during this period. Birth certificates of single live born infants of resident women were the source of data for the study. During the study period, the proportion of women receiving prenatal care in the first trimester increased by nearly 5 percent but was still below the national and state Year 2000 health objective of 90 percent. Notwithstanding this improvement, the percentage of women who did not receive the recommended number of visits in spite of starting care early significantly increased. The overall proportion of women with 'intensive' prenatal care use markedly increased (134.7%). The proportion of women with 'inadequate' care use declined (10.3%), although the proportion of women with 'no care' use doubled. Complete reporting of use of care through birth certificates markedly deteriorated. The findings of this study indicate the need for changes in the targeting and provision of counseling and education on the part of health care providers. Public health leaders, policy makers, health care providers, and advocacy groups need to collectively review programmatic directions with an aim toward the development of innovative approaches to address the emerging health needs of mothers and infants in the state.

Introduction

Prenatal care is considered one of the most important components of maternal and child health by both providers of clinical services and public health officials.¹ Its importance is predicated upon the benefits of 'adequate' prenatal care for the mother and the infant.²⁻⁵ Further, 'adequate' prenatal care utilization has been associated with other future health-promoting behaviors, including appropriate utilization of pediatric health care and positive life-style choices.⁶⁻⁷ While adequacy of prenatal care utilization is typically measured by indices that consider the timing of its initiation and the number of visits, adjusted by the length of gestation,⁸⁻⁹ the content and quality of prenatal care are also considered essential to its effectiveness.¹⁰⁻¹¹ Recently, increasing research has been directed at assessing the impact of the content of prenatal care and establishing its relation with positive birth outcomes.¹² Nevertheless, the benefits of high quality and comprehensive care will not be fully realized without early initiation and regular prenatal care visits.

The national health objectives for the Year 2000 aim at 90 percent first trimester initiation of prenatal care.¹³ In the United States however, early initiation of prenatal care has been far below this target.¹⁴ As a result, several policy initiatives, including expanding the eligibility of the Medicaid program, have been implemented to reduce financial and other barriers to obtaining early care.¹⁵ It remains unclear to what extent these initiatives have changed patterns of participation in prenatal care in individual states or in the U.S. as a whole.

This study examines the utilization of prenatal care in Hawaii from 1979 to 1994. In addition to the expansion of Medicaid eligibility, several programs were initiated in Hawaii during this period with an aim at providing prenatal care to under-served populations and increasing its access and availability.¹⁶⁻¹⁹ Further, 1979-1994 represents a period of increasing health insurance coverage in Hawaii.²⁰ The purpose of this investigation is to determine if early and 'adequate' utilization of prenatal care has changed during this period and to assess the present need of further improvement in prenatal care use among population sub-groups.

Methods

Birth certificates of single live born infants of Hawaii resident women from 1979 to 1994 were the source of data for this study. Births to 283,272 women were included and analyzed by major ethnic groups. Ethnicity was based on the self-reported race/ethnicity of the mother as stated in the birth certificate.

Prenatal care utilization was measured by the trimester care began and the number of prenatal care visits given the gestational age at

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Table 1.—Prenatal Care Utilization, 1993-94, and Percentage Change since 1979-80 by Ethnic Group, Hawaii Resident Single Live Births.

Maternal Ethnicity	Prenatal Care Utilization			
	1st trimester start ² % (% change)		1st trimester start, <adeq, ^{2,3} % (% change)	
Caucasian N 10,030	83.3	(+4.8)	12.7	(+46.0)*
Hawaiian/PH N 9,092	73.9	(+8.0)	14.7	(+33.6)*
Filipino N 7,170	78.5	(+5.6)	15.1	(+42.4)*
Japanese N 4,532	88.9	(+1.3)	13.1	(+118.3)*
Other Asian/PI N 2,868	84.1	(+3.7)	16.1	(+140.3)*
Samoan N 1,049	61.1	(+31.7)	13.5	(+55.2)*
Black N 1,189	77.5	(+7.5)	12.7	(+19.8)*
Total ¹ N 37,299	79.6	(+4.9)	14.1	(+54.9)*

1. Includes all ethnic groups shown and all other ethnic groups which had too few births.

2. Percentages based on cases not missing prenatal care data.

3. Less than adequate = less than 9 prenatal care visits.

*Indicates statistical significance of the linear trend at P < 0.05 as calculated by linear regression.

Table 2.—Adequacy of Prenatal Care Utilization, 1993-94, and Percentage Change since 1979-80 by Ethnic Group, Hawaii Resident Single Live Births.

Maternal Ethnicity	Prenatal Care Utilization					
	Intensive ² % (%change)		Adequate ² % (%change)		Intermediate ² % (%change)	
Caucasian N 10,030	11.6	(+70.6)*	60.2	(-7.9)*	23.0	(+2.2)
Hawaiian/PH N 9,092	12.2	(+229.7)*	48.8	(-11.3)*	29.9	(-2.9)
Filipino N 7,170	10.5	(+275.0)*	53.9	(-12.6)*	28.7	(0)
Japanese N 4,532	13.9	(+162.3)*	62.4	(-19.4)*	19.1	(+27.3)*
Other Asian/PI N 2,868	9.3	(+121.4)*	58.7	(-17.4)*	24.6	(+33.0)*
Samoan N 1,049	8.1	(+145.4)*	40.3	(+14.8)*	33.1	(+2.2)
Black N 1,189	10.8	(+56.5)*	54.9	(-2.0)	28.0	(-3.4)
Total ¹ N 37,299	11.5	(+134.7)*	55.2	(-12.5)*	26.0	(+5.3)*

1. Includes all ethnic groups shown and all other ethnic groups which had too few births.

2. Percentages based on cases not missing prenatal care data.

*Indicates statistical significance of the linear trend at P < 0.05 as calculated by linear regression.

Note: Intensive = 16 or more prenatal care visits. Adequate = 9-15 prenatal care visits. Intermediate = 5-8 prenatal care visits.

birth. Adequacy of prenatal care use was defined according to the index proposed by Alexander and Cornely and categorized as intensive, adequate, intermediate, inadequate and no care.⁹ For a full-term pregnancy with a first trimester initiation of prenatal care, intensive prenatal care implies 16 or more visits, adequate prenatal care 9-15 visits, intermediate prenatal care 5-8 visits and inadequate prenatal care 1-4 visits. Criteria for the number of visits are based on recommendations of the American College of Obstetricians and Gynecologists.²¹ Prenatal care started in the second and third trimester of pregnancy were classified as intermediate and inadequate.

Gestational age in completed weeks was calculated as the interval between date of delivery and date of last menstrual period. When the day of the last normal menstrual period was missing, but the month and the year were known, the Preceding Case method of imputing weeks of gestational age, with the exclusion of implausible gestational ages, was used.²²

Differences in measures of adequacy of prenatal care between 1979-1980 and 1993-1994 were calculated as percent changes. Data for two years were combined to increase the stability of the measures and to reduce the impact of any one-year atypical fluctuation. Linear regression was used to test the statistical significance of the slope in the annual trends of each prenatal care utilization measure for each ethnic group and for the total population. The results of linear regression analysis are provided in Tables 1-3 and are based on data on prenatal care from each of the 16 individual years under investigation. Logistic regression was used to calculate the odds ratios measuring the independent effect of prenatal care utilization on low birth weight, prematurity, and small-for-gestational age in the last four years of the study period. The odds ratios of the logistic regressions were adjusted for maternal socio-demographic charac-

teristics, e.g., maternal age, education, parity, marital status, country of birth, military/civilian status, and ethnicity.

Results

In 1993-94, nearly 80 percent of women who delivered single live births obtained prenatal care in the first trimester (Table 1). This represents a 4.9 percent increase in first trimester initiation of prenatal care since 1979-1980. However, an appreciable proportion of all women (14.1%) did not adhere to the recommended prenatal care visit schedule in spite of starting care in the first trimester of pregnancy and, as such, were classified as not receiving adequate prenatal care. This category of inadequate use of prenatal care significantly increased by 54.9 percent since 1979-80.

Marked ethnic variations in the timing of prenatal care were observed, although over the study period all ethnic groups exhibited an increased proportion of women starting prenatal care in the first trimester. In 1993-1994, Samoan women had the lowest (61.1%) and Japanese the highest (88.9%) percentage of women initiating prenatal care in the first trimester. Further, Samoan women had the highest percent change in early initiation of care (31.7%), while Japanese women had the lowest percent change (1.3%). The proportion of women who had inadequate use of prenatal care, after having initiated care in the first trimester, ranged from 12.7 (Caucasians and Blacks) to 16.1 percent (Other Asian/Pacific Islanders). A greater than 100 percent change in these percentages were observed for Japanese and Other Asian/Pacific Island women, while Black women exhibited the lowest increase (19.8%).

Tables 2 and 3 display levels of adequacy of prenatal care by ethnic group. In the total population, intensive and intermediate levels of prenatal care use increased significantly, while adequate

Table 3.—Adequacy of Prenatal Care Utilization, 1993-94, and Percentage Change since 1979-80 by Ethnic Group, Hawaii Resident Single Live Births.

Maternal Ethnicity	Prenatal Care Utilization					
	Inadeq. PNC ² % (%change)		No PNC ² % (%change)		Missing info. % (%change)	
Caucasian N 10,030	4.6	(-6.1)	0.6	(+50.0)	7.2	(+140.0)*
Hawaiian/PH N 9,092	7.4	(-25.2)	1.7	(+183.3)*	11.9	(+271.9)*
Filipino N 7,170	6.0	(-6.2)	0.9	(+125.0)*	11.1	(+382.6)*
Japanese N 4,532	3.5	(+66.7)*	1.1	(+450.0)	11.6	(+452.4)*
Other Asian/PI N 2,868	5.9	(+1.7)	1.5	(+200.0)	14.1	(+314.7)*
Samoan N 1,049	16.4	(-36.7)*	2.0	(-41.2)	20.3	(+190.0)*
Black N 1,189	5.4	(-25.0)	0.9	(-10.0)	7.7	(+165.5)*
Total ¹ N 37,299	6.1	(-10.3)	1.2	(+100.0)*	10.8	(+260.0)*

1. Includes all ethnic groups shown and all other ethnic groups which had too few births.

2. Percentages based on cases not missing prenatal care data.

*Indicates statistical significance of the linear trend at $P < 0.05$ as calculated by linear regression.

Note: PNC = prenatal care. Inadequate = 1-4 prenatal care visits. Missing info = missing month/trimester of first prenatal care visit, number of prenatal care visits, or date of last menstrual period on birth certificates.

prenatal care decreased significantly (Table 2). Japanese women had the highest proportion of intensive use of prenatal care (13.9%), while Samoan women had the lowest proportion (8.1%). Intensive prenatal care use significantly increased over the study period for all ethnic groups, especially for Hawaiian/Part Hawaiian and Filipino women. These two ethnic groups demonstrated a rise in intensive prenatal care use of 230 and 275 percent respectively. Blacks and Caucasians had the smallest increase in intensive use of prenatal care.

Every ethnic group experienced a decline in the proportion of women obtaining adequate prenatal care except Samoans. In spite of a 14.8 percent increase in adequate use of prenatal care, Samoans still had the lowest percentage (40.3%) of adequate use. Conversely, Japanese women had the highest percent of adequate use of prenatal care (62.4%) and the greatest decrease in this percentage over time (19.1%). In 1993-94, 6.1 percent of women in Hawaii had inadequate use of prenatal care. (Table 3) Overall inadequate use of prenatal care declined over the study period and decreased 36.7 percent in Samoan women. Inadequate prenatal care utilization significantly increased (66.7%) in Japanese women, the only ethnic group to experienced a significant increase in this indicator. Only a small proportion of women (1.2%) did not receive prenatal care in 1993-94. (Table 3) However, this proportion doubled since the first two years of the study period and significantly increased for Hawaiian/Part Hawaiians and Filipinos.

The percentage of birth certificates missing information on gestational age, the month prenatal care began or the number of prenatal care visits increased 260 percent during the study period. All ethnic groups demonstrated this trend with Japanese (452%), Filipino (383%), and Other Asian/Pacific Islander (315%) surpassing the

Table 4.—Regression Analysis of Measures of Adequacy of Prenatal Care Utilization on Pregnancy Outcomes, Hawaii Resident Single Live Births, 1991-94.

Prenatal Care Utilization	LBW ($<2,500$ g)		PreTerm (<37 wks)		SGA	
	odds ratio (95% C.I.)	P value	odds ratio (95% C.I.)	P value	odds ratio (95% C.I.)	P value
Adequate PNC utilization	1.00		1.00		1.00	
Intensive PNC utilization	1.19 (1.06,1.34)	$<.01$	0.96 (0.87,1.06)	.45	1.15 (0.06,1.25)	$<.01$
Intermediate PNC utilization	1.17 (1.08,1.28)	$<.01$	1.27 (1.19,1.35)	$<.01$	1.05 (0.99,1.12)	.08
Inadequate PNC utilization	1.38 (1.21,1.59)	$<.01$	1.28 (1.14,1.43)	$<.01$	1.29 (1.17,1.43)	$<.01$
No PNC utilization	3.71 (2.89,4.77)	$<.01$	3.17 (2.44,4.12)	$<.01$	1.54 (1.14,2.08)	$<.01$
Missing PNC criteria	2.68 (2.44,2.94)	$<.01$	2.59 (2.32,2.88)	$<.01$	1.41 (1.26,1.58)	$<.01$

Note: all odds ratios are adjusted for maternal age, education, parity, marital status, country of birth, military/civilian status, and ethnicity.

PNC = prenatal care. Adequate = 9-15 prenatal care visits. Intensive ≥ 16 prenatal care visits. Intermediate = 5-8 prenatal care visits. Inadequate = 1-4 prenatal care visits. LBW = low birth weight. SGA = small-for-gestational age.

state rate of increase.

Results of the logistic regression analyses of measures of prenatal care adequacy on pregnancy outcomes are shown in Table 4. As compared with adequate prenatal care utilization, intensive, intermediate, inadequate, and no prenatal care showed a significantly higher risk of low birth weight and, with the exception of intensive care, were also predictors of preterm birth. Women with intensive, inadequate and no prenatal care use had a higher risk of a small-for-gestational age infant. Women with missing prenatal care information on the birth certificate demonstrated a higher risk for all three outcomes.

Discussion

This study of prenatal care utilization in Hawaii during the past 16 years revealed several important trends. The proportion of women receiving prenatal care in the first trimester has increased by nearly 5 percent but is still below the national and state Year 2000 health objective of 90 percent.^{13,23} Notwithstanding this improvement in early participation in prenatal care, the percentage of women starting care early but not receiving the recommended number of visits significantly increased (55%). While the proportion of women utilizing prenatal care at the intensive level markedly increased (134.7%), the overall proportion of women in Hawaii who utilized prenatal care at the adequate level declined by 12.5 percent as well as inadequate use which declined by 10.3 percent. Finally, no care use doubled, although remained relatively rare, and the reporting of prenatal care use in birth certificates clearly deteriorated, reducing the value of this data source for public health assessment and policy analysis.

The state of Hawaii has been very active in implementing initiatives aimed at reducing financial and other barriers to obtaining early prenatal care. In 1974, Hawaii enacted the Prepaid Health Care Act that required most employers to provide coverage by a prepaid

health care plan that would include maternity benefits to employees working more than fifty percent time.²⁰ The federal expansion of Medicaid eligibility in the early eighties and later the implementation of presumptive eligibility for pregnant women ensured the availability of prenatal care without delay.¹⁶ The enactment of the State Health Insurance Program brought the availability of care to virtually the whole population.²⁰ Several educational efforts were also initiated by the collaboration of public and private agencies as the Healthy Mothers Healthy Babies Coalition, Mothers' Care for Tomorrow's Children, the MCH Branch of the Department of Health Family Health Services Division, and others.¹⁷⁻¹⁹ Our findings of improved early use of prenatal care probably reflect the results of these initiatives in the change from 76 percent early initiation of care in 1979-80 to almost 80 percent in 1993-94.

The improvement in early initiation of care is tempered by the large increase of the proportion of women who in spite of starting prenatal care in the first trimester do not receive the recommended number of prenatal care visits. It is possible that, while the efforts to ensure access to care were successful, education campaigns and care providers were not sufficiently clear on the need for continued care throughout pregnancy. It is also possible that the care provided was not attentive enough to the cultural needs of the woman, which may have increased the occurrence of non-compliance with the scheduled follow-up visits. In addition to influencing compliance with scheduled visits, the information provided by the physician at the first prenatal care contact may be especially effective and greatly valued by the woman. It has been reported, for example, that smokers are more likely to quit after receiving advice from a physician.²⁴ It has also been reported that prenatal care advice is differentially provided to different population groups by health care providers.²⁵ It may be appropriate for local professional organizations to promote and monitor the educational content of prenatal care in addition to its medical component so that the quality of prenatal care delivered in the state may be maximized.¹¹

The significant reduction in the proportion of women who received adequate prenatal care may be compensated by the marked increase in the proportion of those receiving intensive prenatal care. Intensive prenatal care (16 or more visits for a full-term pregnancy) has been found to be associated with an increased risk of delivering a low birth weight and a small-for-gestational age infant in this and other studies,²⁶ indicating that this level of care reflects the presence of pregnancy complications. To this extent, the large increases in intensive prenatal care utilization experienced by Hawaiian/Part-Hawaiian, Filipino, and Samoan mothers can be interpreted as an indication of improved availability of prenatal care for these traditionally higher risk population groups. Whether the same assumption can be made for the significant increase of intensive prenatal care utilization by Japanese and Other Asian/Pacific Island mothers deserves further investigation.

At the state level, one-fourth of pregnant women utilize prenatal care at the intermediate level (5-8 visits for a full-term pregnancy), while a smaller but important proportion (7.3%) have inadequate (1-4 visits for a full-term pregnancy) or no prenatal care use. Unmarried status at the time of delivery was identified as the most important determinant of no prenatal care utilization in a previous study.²⁷ High parity-for-age, low educational attainment, and foreign nativity status were also found to be risk factors. While high parity-for-age and low educational attainment have declined during the study

period, foreign nativity status and especially unmarried status have increased markedly.²⁸ This finding highlights the need to enhance efforts to reach single pregnant women with the message of the importance of prenatal care. It should be noted that the rise in births to single women is not limited to mothers less than 18 years of age, which constitute less than 4 percent of all Hawaii women who give birth.²⁸ Outreach activities and the provision of health insurance should also focus on foreign-born mothers. More than one fourth of births in Hawaii were to foreign-born mothers in 1993-94, many of which could be new immigrants.²⁸

The findings of this study highlight the importance of monitoring indicators of health status and health services utilization, particularly during periods of changing health care financing and insurance policies, in order to facilitate the assessment of the potential impact of these policies. In Hawaii, managed care for Medicaid clients was initiated in July 1994 through the enactment of the QUEST program.²⁹ It is unclear what effect the establishment of this new publicly financed health insurance system will have on the current levels and rate of change in prenatal care utilization. The examination of vital records in the years following the QUEST enactment may help to clarify what if any impact this development will have on prenatal care use in Hawaii.

The present validity and accuracy of birth certificates in Hawaii is not known. A report of the Research and Statistics Office of the Health Department in 1979, described a remarkable improvement of the completeness and accuracy of birth certificates after the initiation of a collaborative program with the National Center for Health Statistics.³⁰ Most of the errors at the time involved the reporting of complications and anomalies, which were not reported or noted in the wrong place. Another common error was the omission of the day in the date of the last menstrual period. This study demonstrates the value of birth certificates as a readily available and useful source of data for monitoring health status and health care use. Unfortunately, it also shows a striking increase in the number of records with incomplete information on important aspects of care, a fact which erodes their relevance. It is important that the responsible officials identify the source of the incompleteness and assess the accuracy of the information reported. Although birth certificates are not completed by obstetricians, their expressed concern and cooperation in this effort will be essential to reverse the trend and ensure that the reliability and validity of this unique data source for monitoring maternal and infant care in Hawaii is maintained.

The health status of mothers and infants and their access to needed health care are concerns of both public health officials and providers of health services. The findings of this study are relevant to all providers of care, public and private, as old maternal risk problems (e.g., low educational attainment, high parity-for-age) decrease and new ones (e.g., inadequate prenatal care use after early initiation, births to single women, and births to women 35 years or older) emerge or become more frequent in all ethnic groups in the population.²⁸ These changes in risk status and prenatal care use patterns necessitate changes in the targeting and provision of counseling and education on the part of individual providers. Public health leaders, health care providers, policy makers and advocacy groups need to collectively review traditionally accepted risk indicators and related programmatic directions with an aim toward the future development of innovative approaches to address emerging health needs of mothers and infants in the state.

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American Heart Association Marks 50 Years of Progress

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and Stroke



1950s AHA links smoking to heart disease

1960s AHA-funded scientists develop
pacemaker, valve replacement
surgery

1970s Educational campaign
emphasizes heart attack
warning signs

1980s Washington office opened to be
nation's advocate on heart and
stroke health issues

1990s AHA's long-term investment in research
surpasses \$1 billion



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Life in These Parts

Conference Notes

New Developments in the Clinical

Management of Type II Diabetes

(Notes from a Teleforum Program Sponsored by The Institute for Medical Studies)

Speaker Kenneth Feingold, Professor of Medicine & Dermatology Univ. of C, VA Medical Center

Prevalence of Glucose Intolerance

Increases with older population: Age 65 to 74
30% of U.S. population

July 1997 screening recommendations of the American Diabetes Association:

- Age 45+: Screen q 3 years
- Screen younger population with high risks:

Obesity; relatives with diabetes; Hypertensives & dyslipidemics (High triglyceride); women with babies 9 lbs or heavier.

- Diagnostic criteria:

- Formerly FBS 140+; now 126+ on two different days
- HbA1c: Not criteria for dx (Standardization of HbA1c varies)
- Random insulin levels not diagnostic

Pathogenesis of DM

Insulin resistance is hallmark

Genetics → Insulin Resistance ← Acquired

Hyperinsulinemia
↓
Compensated Insulin Resistance
Normal glucose tolerance

Obesity
Sedentary lifestyle
Aging

↓
Impaired glucose tolerance

Genetics → B Cell "Failure" ← Acquired

Increased hepatic glucose

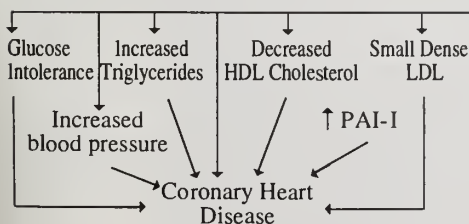
Type II Diabetes

• Glucotoxicity
• FFA levels ↑
• Other

Insulin Resistance Syndrome: Syndrome X

Genetic Influences → Insulin Resistance ← Environmental Influence

Hyperinsulinemia



Treatment

Treatment goals:

HGA1c <7.0

>8.0 = poor metabolic control

<8.0 = acceptable

Interpretation HBA1c:

6.0 = 120 mg

7.0 = 150 mg

ie 1% HBA1c = 30 mg

Measure HBA1c q 3 mos

Oral Hypoglycemic Agents:

- Sulfonylureas:

First Generation: (eg tolbutamide)

Second Generation: (eg glipizide)

Third generation (eg gimepiride)

- Biguanides: Metformin

- a-Glucosidase inhibitors: Acarbose

- Thiazolidinediones: Troglitazone

*Metformin: Danger of lactic acidosis; avoid when creatinine > 1.4; stop when albuminuria occurs

*Troglitazone:

- Activates nuclear receptor PPAR in skeletal muscle.
- Works best on diabetics with insulin resistance
- Lowers glucose level and insulin level
- Possible hepatic damage

***Polycystic Ovarian Syndrome:

- 6% of premenopausal women
- a/c hyperinsulinemia & insulin resistance
- Treated with troglitazone lowers the testosterone level
 - Increases fertility in premenopausal woman (therefore these patients need to be on birth control Rx)
 - Reduces hirsutism

Troglitazone Trials:

- U.S. Trial Troglitazone + Insulin (6 months c 50 patients)
 - Lowered HBA1c 1.41%; lowers insulin dose
- Second Trial (6 mos with 200 pts) Middle age pts with high HBA1c and high BMI.
 - 200 mg lowered insulin dose 41%
 - 400 mg lowered insulin dose 58%
 - 15% patients stopped insulin
- Lipid Metabolism in Troglitazone + Insulin Trials
 - Lowered triglyceride levels 20 - 25%
 - Raised LDL levels 3 - 11%
 - APOB: No change in levels
 - Raised HDL levels 6 - 18%
- Troglitazone Safety Profile:
 - Overall adverse events none
 - Small decreases in hemoglobin 2° plasma volume increase
 - In combination therapy, insulin dose maybe necessary to prevent hypoglycemia
 - May result in resumption of ovulation

and risk of pregnancy in polycystic ovarian disease

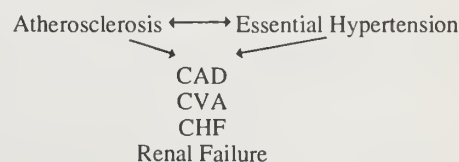
- Less than 1% liver function abnormalities
- No LV mass increase
- No dose adjustment required in patients with renal dysfunction
- No differences in safety with elderly patients
- May lower estrogen levels in women on birth control pills

Conference Notes

Goals of Hypertension Therapy

by VP Michael Moore, Assistant clinical Prof. of Medicine, Dept. of Nephrology, Wake Forest University, Bowman Gray School of Medicine. QMC Fri am 10-24-97.

***The Fundamental Goal of Hypertension Therapy: Live Longer



Systolic Hypertension (SHEP) causes:

- CVA - 37%
- MI - 24%
- TIA - 25%
- CHF - 54%

Treatment Goal of HTN Rx: <140/90

Preferred Initial Rx:

- Diuretics
- BB (Beta Blockers)

Alternative Drugs:

- ACE
- Angiotensin II Blockers
- Ca B (Calcium channel blockers)
- Ca B/ACE
- Alpha 1 blockers
- Alpha Beta
- Sympatholytics

HTN Therapy reduces:

- CVA - 59%
- CAD - 53%
- CHF hospitalization
- ESRD incidence

**ESRD 2° to DM, HTN, & glomerulonephritis

**We need to be more aggressive in BP control: Only 53% of hypertensives are on drug therapy; only 24% are controlled; 29% are not controlled.

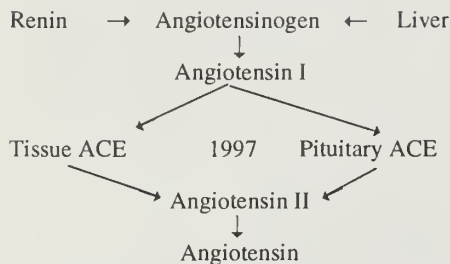
Evolution of HTN drugs:

- Diuretics
- Vasodilators
- Sympatholytics
- Beta blockers
- Calcium channel blockers

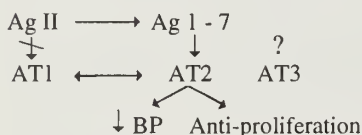
- ACEI
- ARB

US HTN Market 1995: \$4.8 x 10⁹

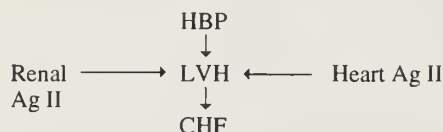
CCB 28%
ACE 22%
BB 13%
Diuretics 21%
Others 16%



Possible 2° Effects of AT1 Blockade



Angiotensin II in CHF:



Angiotensin II:

- Increases aldosterone synthesis
- Increases proximal tubular resorption

ACE Patients: - feel better
- live longer
- less hospitalization

***Goal of HTN Therapy:
prevent end organ damage

Angiotensin II Blocker

- Reduces peripheral vascular resistance
- Reverses LVH
- Prevent post MI CHF
- Improves CHF
- Slows diabetic nephropathy
- Slows hypertensive nephropathy

Susumu Fujii - A Physician's Eulogy

Sunset and evening star
And one clear call for me.
And may there be no moaning of the bar,
When I put out to sea.

Twilight and evening bell,
And after that the dark!
And may there be no sadness of farewell,
When I embark.

Crossing the Bar by Alfred Tennyson

Somehow, we feel that perhaps Susumu
would have wanted "Crossing the Bar" recited
at this time. There are so many fond memories

of Susumu Fujii, where shall we begin?

Susumu was our friend, our mentor and in many ways an older brother we didn't have.

We first met Susumu in the summer of 1943 when the first large contingent of Hawaii Nisei volunteers were sent to Camp Savage Minnesota for military intelligence training.

Susumu was in Section I (the elite of the 500 plus group based on language testing) and we were next door in Section II. We immediately like this quiet, unassuming, knowledgeable individual.

He took us to our first symphony concert—the Minneapolis Symphony conducted by maestro Mitropoulos who waved his baton and shook his cue ball head in time with the music. We were fascinated by the performance. Happenstance, we glanced at Susumu who was fast asleep.

We found that Susumu with his quiet demeanor was a thesaurus of both languages, Japanese and English. His first love was Japanese culture and history. He introduced us to E.B. White's New Yorker so that we would learn to write English prose precisely and concisely.

Susumu took us to see the Kabuki in Tokyo and we remember meeting one of the Ichikawa's backstage.

When the six month language training ended Susumu stayed on at Camp Savage as an instructor while we peons were shipped out. But our paths crossed in Tokyo when the war ended and we became part of the occupation forces. Susumu was assigned to McArthur Headquarters and we were with G-2.

We remember being called one evening in Tokyo by an excited Susumu who had just purchased his first car. That's when we learned that he had never driven before and he drove us all around Marunouchi in first and second gears.

Like many intellectual giants, he was less coordinated in motor skills. He also played golf like he drove but whatever he did, he did with unfaltering enthusiasm.

Susumu returned to Hawaii and found a position with Customs where he became the expert on oriental art objects. When he retired from U.S. Customs, he became a successful realtor.

We opened our medical office on Vineyard in 1957, and Susumu came in daily with paint and paint brush to help paint the office. He was one of our first patients.

One of the happiest moments in Susumu's life was when Harue and Wayne arrived from Japan. He now had a family and he was so proud of Wayne's success as an architectural journalist and Harue's forte as a KOHO radio announcer.

Then came sad and tragic events; as Susumu's physician, we were involved.

In 1984, he had TURP (transurethral resection of his prostate).

In 1989, he had adeno CA of his right colon (which was resected and cured).

In 1990, he had transitional Ca of the bladder which was treated and cured.

Then he developed Parkinsonism which despite medication still resulted in his physical and neurological deterioration and perhaps his ultimate demise.

Throughout these difficult years, he never complained and we agonized at our own helplessness. Thank you Susumu for sharing your life experiences with us. You have been a true friend, our mentor and a forgiving patient.

Classified Notices

To place a classified notice:

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Special Issue on Clinical Toxicology and the Hawaii Poison Center - Part I

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 - *It still takes forever to check patient eligibility*
 - *HMSA will never accept it*
-

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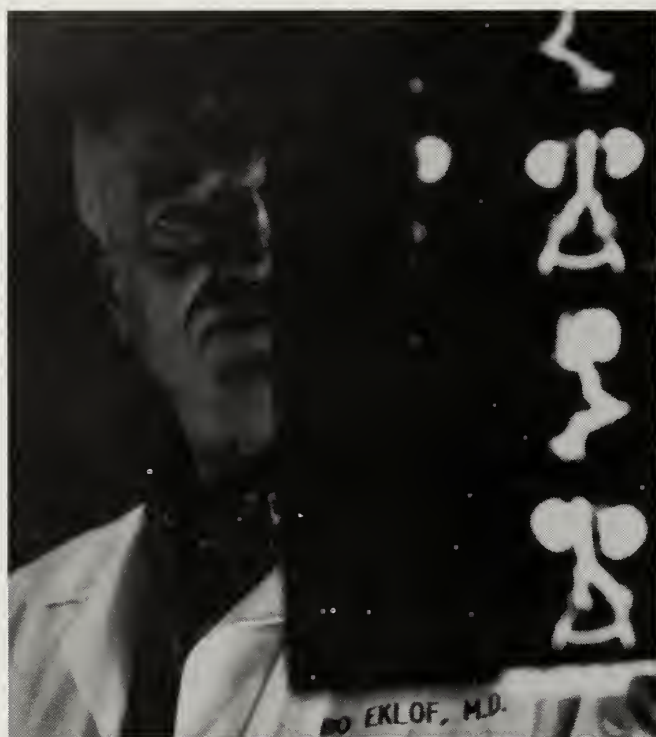


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You are invited to attend...

– Friday Noon Conference –
Luncheon

Hepatitis C: 1998

Willis C. Maddrey, MD

March 6, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants will be able to:

- Understand the natural history of chronic hepatitis C viral infection and factors which influence the course in an individual patient.
- Recognize the range of clinical disorders associated with hepatitis C.
- Develop a comprehensive program for the long term management of patients with chronic hepatitis C.

We would like to acknowledge the Educational Grant
Schering Oncology Biotech.

– Friday Noon Conference –
Luncheon

Mixed Anxiety and Depression

Peter L. Forster, MD

March 13, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants will be able to:

- Understand relationship of anxiety and depression.
- Learn how to assess patients and initiate effective treatment.
- Effectively discuss anxiety and depression with patients.

We would like to acknowledge the Educational Grant Bristol-Myers Squibb.

– Friday Noon Conference –
Luncheon

Evaluation, Diagnosis and Treatment of Impotence for the Primary Care Physician

March 20, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants will be able to:

- Provide the primary care physician with an anatomic and physiologic overview of normal erectile function and erectile dysfunction (ED).
- Discuss the causes of organic impotence.
- Discuss the diagnosis, evaluation and treatment options of the erectile dysfunction patient.

We would like to acknowledge the Educational Grant Osborn - IMAGYN.

– Friday Noon Conference –
Hospice Case Studies

Elizabeth Nelson, RN, MPH & Kathy Hallock, LSW

March 27, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants will be able to:

- Describe the hospice philosophy and admission criteria as well as services offered.
- Understand the referral process.
- Describe the difference between hospice home care and residential hospice care.

Please call Fran Smith at 522-4471 for more information.



Editorials

March Special Issue

Norman Goldstein MD
Editor

This Special Issue honors the Hawaii Poison Center—helping physicians, nurses and the general public for 40 years.

Last year the Center received more than 12,000 calls for help and information. One in five calls came from health professionals.

Guest editors John Racine, PhD, RN is an Assistant Professor in University of Hawaii—Manoa School of Nursing and Chair of the Education Research Committee of the Hawaii Poison Center and Alson S. Inaba, MD Associate Professor of Pediatrics in the John A. Burns School of Medicine and Medical Director of the Hawaii Poison Center, have provided a very special Special Issue.

This issue belongs in every pediatric, family practice, and internal medical practice office as well as every emergency room in the State! It is an extremely valuable source of practical information on clinical toxicology and the operations of the Poison Control Center.

Mahalo to John Racine, Al Inaba, and Debbie Ahina, manager of the Hawaii Poison Center for a superb Special Edition.

A limited number of extra copies are available at the Journal office. Call 536-7702, ext. 2239 for more information.

Guest Editors

Clinical Toxicology and the Hawaii Poison Center

John F. Racine, PhD, RN and Alson S. Inaba MD
Guest Editors

We appreciate the opportunity to commemorate the 40th anniversary of the Hawaii Poison Center (HPC) with this special issue of the *Hawaii Medical Journal* on Clinical Toxicology and the Hawaii Poison Center. Poisoning is a serious health problem, with which clinicians are probably familiar, particularly if they have family, internal medicine, or pediatric practices. Usually classified as an injury, poisoning is the third leading cause of unintentional deaths in the United States.¹ The call volume of the HPC, almost 12,000 calls in 1996-1997, indicates that it is also an issue in our State. As an analysis of these calls in this issue has shown, clinicians also seek the expertise and information from the specialized databases of the Center, comprising 13 percent of all callers. For an inside look at operations and some of the specific queries received by the Center, another article in the Journal provides a sense of the resources available for health professionals and the protocols followed for victims.

In this issue, several features are provided for the continuing education of clinicians. First of all, a systematic approach to assessment of the poisoned child, the most likely victim, is presented. Secondly, there are questions to challenge current clinical knowledge of toxicology, accompanied by their answers. Third, since acute poisoning usually presents in panic, clinical techniques for crisis intervention and emergency counseling are reviewed in a case study. Finally, selected references from the print and electronic databases of the Hawaii Medical Library are recommended for further investigation into clinical toxicology.

It is very appropriate for the Journal to dedicate a special issue to this topic on the 40th anniversary of the Hawaii Poison Center. The Journal had published a study by Dr L. T. Chun in 1951, reprinted in this issue, which called attention to kerosene poisoning among children, as well as articles by Drs Ho and Char over the years. The dissemination of this research helped to alert the medical community about this serious health problem in our community and resulted in the creation of the Hawaii Poison Center. These medical leaders were sought out to reconstruct the history of poisoning in Hawaii and the origins of the Center which is recounted in this issue. Poisoning, as stated above, continues to be a problem in the State of Hawaii. The Hawaii Poison Center, as suggested in the economic analysis discussed in the issue, is a low cost and accessible alternative to the treatment of poisoning emergencies and offers benefits to the public, providers, and third party payers.

We again thank Dr Goldstein and the *Journal* for reminding the medical community that the problem of poisoning persists. We believe that the Hawaii Poison Center deserves all of our support in order to continue providing the specialized and expert resources in preventing and managing human poisoning in our State.

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President's Message

Leonard Howard MD

What is this Consortium that we keep hearing about?

We have something new in the political scene in Hawaii. The physicians have finally realized that it is necessary to present a unified front to outsiders, be they legislators, health insurance companies or federal agencies. Thus was born the Consortium, which is an association of five physician organizations including, in alphabetical order, Hawaii Coalition for Health, Hawaii Federation of Physicians and Dentists, Hawaii Medical Association, Pacific Medical Administrative Group, and Queen's Medical Group.

The Consortium was formed during the discussions with HMSA, and presented a unified front in the continuing meetings, first with the Insurance Commissioner, then with the leadership of HMSA. With the aid of lawyer members of the Coalition, the HMSA Provider Agreement was carefully examined for its effect on the practice of medicine, and the ability of physicians to make the decisions as to how their patients are to be treated. A position paper was developed which was the basis for continuing discussions, both public and private, which ultimately led to creation of an agreement that was at least acceptable to the Consortium. It did not answer all the problems, but was the basis for a two-year trial period to see how it would work in practice.

When Queen's Hospital put out a Participating Provider Agreement for their new Worker's Comp and No-Fault Provider Group, many of the problem areas identified in the HMSA contract were also identified. When these were brought to the attention of Queen's Hospital by the Consortium, they immediately accepted all the changes that had been made by HMSA in the previous discussions. There was no need for the prolonged discussions and media debates that went on with the original efforts. At this point in time, St. Francis has put forth another Provider Agreement, containing many of the same problems. The Consortium has offered their assistance to St. Francis' administration in order to bring their agreement into a form that will be acceptable to the physicians.

In the legislative arena, the Coalition, Federation and the HMA are working in a coordinated fashion to represent the physicians of Hawaii in legislative matters. It has evoked comments from the legislators that "the physicians are finally speaking with one voice" which is much more effective. The Consortium concept allows each organization to maintain their own philosophic standards, while coming together as a unified whole when the action is acceptable to all members. The HMA will continue to hold our traditional values while at the same time working for the common good. I don't think anyone has any idea that managed care is going away. Our job now is to ensure that managed care is quality care. The only way we do this is by working together for our patients. If we don't we will sink together by ourselves. In Unity there is Strength!

High Cost of Cardiovascular Disease and Stroke in 1998

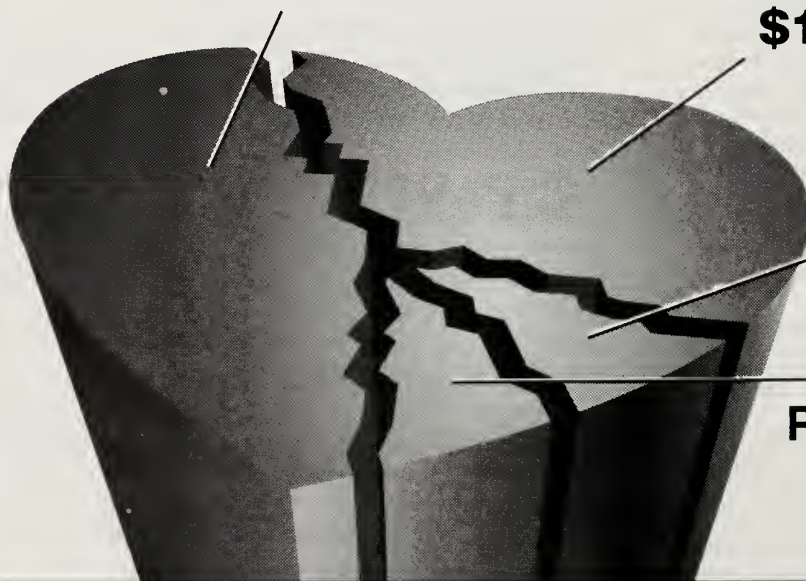
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Military Medicine

Tripler's Emergency Medical Response Team

MAJ Robert E. Johnson MD
Assistant Commander
Emergency Medical Response Team
Tripler Army Medical Center

...a passenger jet crashes on takeoff from the Majuro airport...a canister of mustard agent is accidentally dropped and leaks at the Chemical Demilitarization Plant at Johnston Atoll, resulting in several severe chemical casualties...an explosion rips through the new convention center, resulting in scores of deaths and hundreds of trauma victims, overwhelming Honolulu EMS capabilities, and worse yet, many victims are found convulsing and apneic, demonstrating evidence of a sinister terrorist bombing with nerve agent. Use your imagination and think of the recent disasters that have occurred worldwide, both acts of nature and acts of terrorism, and wonder how we would respond here in Honolulu or elsewhere in the Central Pacific.

For almost twenty years, Tripler Army Medical Center has had an Emergency Medical Response Team (EMRT), dedicated to responding to just such scenarios. When the Johnston Atoll Chemical Demilitarization Plant was under construction in the 1980's, increased emphasis was placed on the EMRT, leading to substantial improvements in its organization, training and equipment. The bombings of the World Trade Center and the Alfred P. Murrah Federal Office Building in Oklahoma City, the Tokyo sarin gas attack by the Aum Shinrikyo cult and other incidents have led the Department of Defense to increase its emphasis on assistance to the civilian populations of our nation and its friends. At Tripler, this emphasis has been translated into another generation of improvements in the EMRT, to better enable it to assist and interface with local and regional emergency response plans.

The EMRT is comprised of thirty doctors, nurses, corpsmen and two administrative officers. All members are volunteers, and are recruited based on their individual motivation, commitment, and level of experience in medical operations in austere environments. Of these thirty, eight are physicians: a commander and assistant commander with extensive experience and training in military operational medicine and nuclear, biological and chemical (NBC) casualty management; two emergency physicians; two general surgeons and two critical care physicians. All physicians are qualified in Advanced Trauma Life Support (ATLS) and have attended the U.S. Army's course in chemical and biological casualty management. Two nurse anesthetists and two registered nurses are also team members; they, too, are required to attend the chemical and biological casualty course. The complement of enlisted medical personnel includes two LPNs, several paramedics and EMTs, as well as laboratory and radiographic technicians. All team members receive

enhanced training in trauma management, triage, personal protective equipment, decontamination of chemical casualties and emergency management of NBC agent casualties. If needed, the EMRT can be augmented with personnel from Tripler's Mental Health and Radiation Accident Management Teams.

The EMRT has a three-tiered mission. Its primary responsibility is to back up the medical operations at Johnston Atoll in the event of a large scale accident. The risk of such an event is extremely low, due to the multiple layers of safety checks and containment engineered into the plant. Even so, the EMRT maintains a high level of readiness with frequent event simulation exercises and state-of-the-art medical and chemical protection equipment.

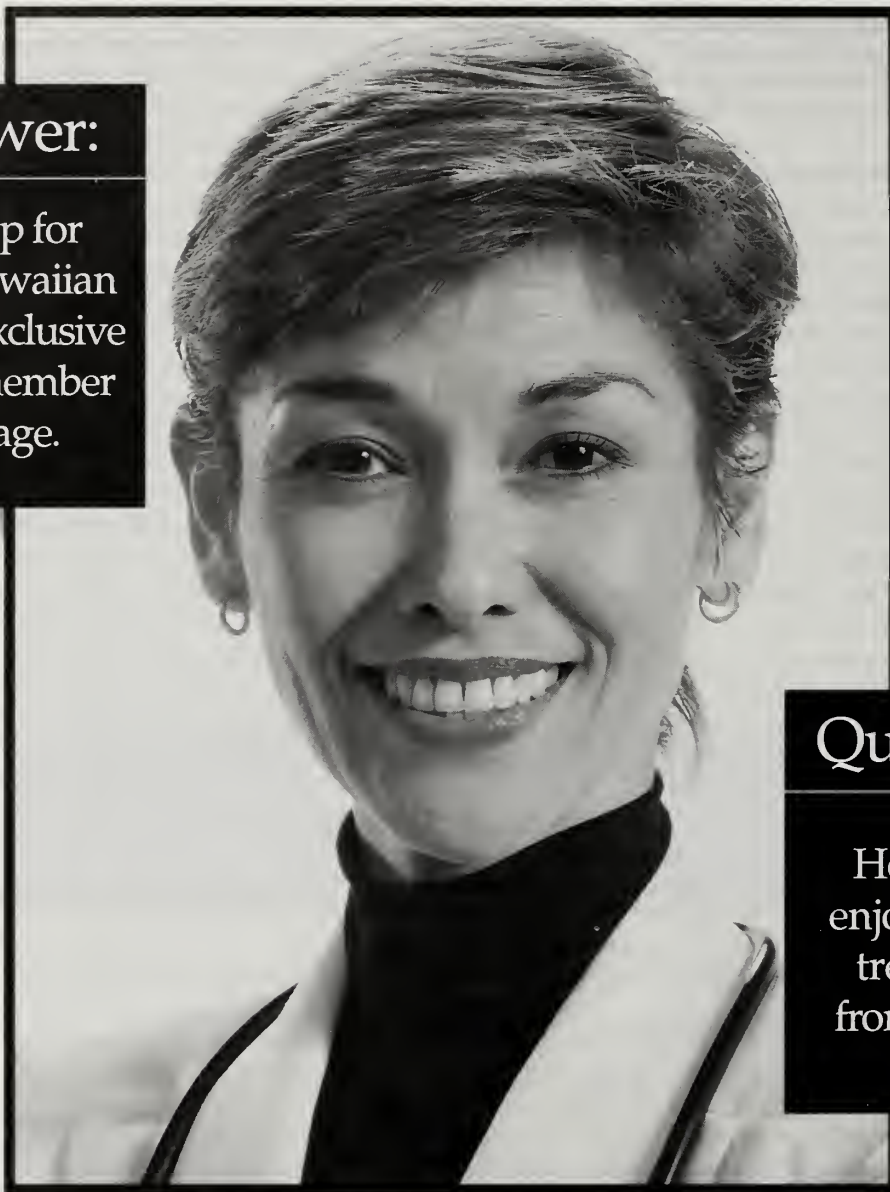
Because of the team's rapid response capability and ability to treat and stabilize trauma victims in hostile environments, the TAMC commander, Brigadier General Warren Todd, has decided to make the EMRT available as a response asset to augment the emergency responders of the State of Hawaii in the event of a mass disaster. The team would be especially effective if the disaster involved the use of weapons of mass destruction (WMD), i.e., nuclear, biological or chemical weapons. This is its second mission. In this scenario the EMRT would provide assistance in two ways: 1) it functions as a platform for the provision of ATLS in the proximity of a WMD or conventional disaster, and 2) team members in advanced personal protective equipment would be able to triage and provide EMT-level medical care to victims who had not yet been decontaminated or evacuated from the scene of the accident. EMRT leadership personnel have developed a close liaison with the emergency response community in Honolulu, to include leaders in the State and County civil defense offices, Honolulu EMS, Fire and Police Departments, as well as with FEMA and other Department of Defense agencies. An important spin-off of this liaison has been the involvement on a consulting basis of EMRT physicians in the development of Honolulu's planned Metropolitan Medical Strike Team (MMST). MMSTs are currently being formed in the 26 largest U.S. cities with support from the federal government. Their purpose is focal and unique to respond to mass disasters involving WMDs.

The third mission of the EMRT is to provide assistance to other territories and nations in the Pacific who request assistance in the event of a disaster involving significant casualties. The EMRT is currently directing its energies at enhancing its response capabilities in this role. The types of disasters that might require the team's assistance include hurricanes, tsunamis, earthquakes, aircraft accidents and explosions.

Because of the insular nature of the Hawaii community, we are not likely to benefit from the emergency deployment of disaster assistance teams from the mainland in the event of a catastrophe. The central Pacific area is home to many people who lack an effective health care system and certainly lack the ability to respond effectively to a mass disaster. The command group at Tripler and the personnel of the EMRT are keenly aware of these dilemmas. It is our purpose to fill this gap.

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Medical School Hotline

The Role of Geriatric Psychiatry in Medical Education

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The citizens of Hawaii currently enjoy an average life span of about 79 years, about 3 years longer than the mainland counterpart. In 1990, 11.2% of the state population was elderly. This percentage is expected to increase to 18.5% by the year 2020. Individuals over 85 years are the fastest growing cohort with a projected tripling of current numbers by the year 2020.¹ Many elderly have mental health problems. It has been estimated that 15-25% of the elderly have psychiatric disorders with the proportion increasing to 40-50% for hospitalized elderly.² Unfortunately, despite the ever increasing geriatric population and need for services, relatively few psychiatrists in Hawaii have been interested in working with this population. Nationally there has been a shortage of psychiatrists with geriatric expertise. Prior to 1978 there was only one training program in geriatric psychiatry. By 1995 there were 40 Accreditation Council for Graduate Medical Education (ACGME)-approved residencies. Psychiatrists are eligible for geriatric training after completion of a four-year general adult psychiatric residency. The first examination for added qualifications in geriatric psychiatry was given by the American Board of Psychiatry and Neurology (ABPN) in 1991. By 1996 there were 1200 psychiatrists who had passed this examination.³ However, in Hawaii, there were only seven psychiatrists as of 1996 who had attained a certificate for added qualifications in geriatric psychiatry.⁴ Since most of these psychiatrists practiced in a university or federal system, there was a great need for geriatric services in the community. As a result, a geriatric psychiatry training program was created which would fulfill this critical shortage area for Hawaii and the Pacific Basin.

The John A. Burns School of Medicine (JABSOM) geriatric psychiatry residency involves one year of sub-speciality training. It is a part of the Department of Psychiatry which includes adult, child and adolescent psychiatry. The supervisors are JABSOM geriatric psychiatrists who see patients with the residents at a number of sites including Hawaii State Hospital, Queen's Medical Center, Geriatric and Family Consultation Service (GFCS) and Hale Pulama Mau at Kuakini Medical Center, Veter-

ans Administration (VA) Clinics, PACE-Maluhia (an adult day hospital), community agencies and various nursing homes in Hawaii. The Department of Health (DOH) and the VA provide funding for the training positions. The JABSOM geriatric psychiatry training program started in July of 1996 with two graduates from the JABSOM psychiatry residency.

Compared with younger patients, older individuals have a significantly higher percentage of cognitive disorders such as Alzheimer and vascular dementia. Such cognitive disorders can directly or indirectly lead to treatable psychiatric syndromes. Depressive disorders which are also common typically respond well to various therapies. Unfortunately, many health care providers do not recognize such psychiatric disorders, a problem which is aggravated by the overlap and co-morbidity with medical illness. In fact, in the elderly the dichotomy of physical versus mental illness is an artificial and impractical boundary for many conditions such as dementia and delirium. Other clinicians may recognize the psychiatric symptoms but falsely claim that it is the "natural course" of aging or that the patient is "understandably depressed" and not treat a treatable illness. It is especially important for a primary care physician to be aware of psychiatric illness in the elderly because most mentally ill elderly first present to a primary care physician rather than a psychiatrist. Thus, geriatric psychiatry has an important role in addressing the mental health needs of the elderly through recognition and appropriate treatment of illness.

Issues in geriatric psychiatry often overlap with geriatric medicine, neurology, adult psychiatry and neuropsychology. The geriatric psychiatry residency was designed to maximize the interface with geriatric medicine and related disciplines. There has been a particularly close and collaborative relationship with the geriatric medicine training program headed by Dr. Patricia Blanchette. The geriatric psychiatry training program works together with geriatric medicine faculty and trainees at Hawaii State Hospital, Kuakini Medical Center, VA, Queen's Medical Center and PACE-Maluhia. For example at Queen's Medical Center, both geriatric medicine and geriatric psychiatry are involved in providing consultation to the medical/surgical units. Liaison meetings are held weekly to discuss cases as well as mutually interesting topics. In addition to geriatric medicine, there is also extensive teaching, consultation and liaison work with general psychiatry, neurology and neuropsychology.

The geriatric psychiatry faculty also teach various physicians and other health care providers in the medical school and the commu-

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nity. An example is the Geriatric Education Series at Kuakini Medical Center. Residents in family practice and internal medicine have had some elective time in geriatric psychiatry. An elective in geriatric psychiatry is available for medical students. There has even been some training to law students at the University of Hawaii William S. Richardson School of Law regarding advanced directives and assessment of decisional capacity of health care needs. The geriatric psychiatry trainees themselves are involved in both formal and informal teaching of geriatric psychiatry in various settings to residents, medical students and other health care personnel. The didactics for the course involves selected topics in geriatric medi-

cine, geriatric psychiatry, neuropsychology, community psychiatry, and neurology taught by JABSOM faculty and community gerontologists.

Although research is not a specific requirement of the training program, the residents are given protected time for research and encouraged to pursue interests. The faculty are involved in some collaborative research projects with geriatric medicine and neuropsychology. Already, the faculty have presented at national meetings including the American Psychiatric Association (APA) and the American Association for Geriatric Psychiatry (AAGP). With the clinical and teaching base established at this point, it is hoped that research will gain further importance in geriatric psychiatry.

The geriatric medicine program started in 1986 and by 1995 had graduated 18 new geriatricians.⁵ In June of 1997 the first two geriatric psychiatry residents graduated from the program. Hopefully, this new geriatric psychiatry training program will be able to provide sufficient numbers of future clinicians, teachers and researchers for the state of Hawaii and the Pacific Basin.

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CT Demonstration of a Pancreatic Duct Stricture and Obstructive Pancreatitis with ERCP and Intraoperative Correlation

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We describe a case of a pancreatic duct stricture in a young female resulting in chronic intermittent obstructive pancreatitis, and requiring repeated hospitalizations over a ten year period. The stricture was identified by computed tomographic (CT) scan and endoscopic retrograde cholangio-pancreatography (ERCP) and noted to be in the distal pancreatic duct. The patient was treated successfully with distal pancreatectomy. This case report illustrates the utility of CT scanning and ERCP in determining the etiology of pancreatitis. When a stricture is identified, these studies give anatomic detail that aid in intra-operative decision making.

Key words: Pancreatitis, obstructive—Pancreas, CT—Pancreas, US—Pancreas, ERCP—Pancreas, stricture.

Case report

A 26-year-old Micronesian female presented to the general surgery service at Tripler Army Medical Center, Honolulu, Hawaii with a ten year history of intermittent pancreatitis. This was manifest by epigastric abdominal pain, nausea, vomiting, and hyperamylasemia. She had been managed successfully with conservative therapy on multiple previous admissions to her local hospital. The patient had no medications during this time period, and had no history of alcohol use, trauma, or hyperlipidemia.

At the time of referral to our institution, the patient was asymptomatic. Physical exam was unremarkable. Laboratory exam revealed an amylase of 63 U/L, a lipase of 104 U/L, normal liver enzymes and total bilirubin, a normal arterial blood gas, a calcium of 8.5 mg/dl, and a white blood cell count of 8,100.

The patient was initially evaluated with a right upper quadrant ultrasound which was normal. This was followed by an ERCP. The pancreaticogram demonstrated a focal pancreatic duct stricture in the mid-body of the pancreas with dilatation of the duct distal to the stricture. Subsequently, a helical CT scan of the pancreas was obtained with 3 mm collimation and a pitch of 1.5. Contrast was demonstrated within the biliary system and pancreatic duct. An acute focal narrowing of the distal portion of the pancreatic duct was noted, with no contrast seen distal to this point (figure 1). This corresponded directly to the isolated stricture seen on ERCP. The classic chain of lakes appearance of the pancreatic duct and pancreatic calcifications were absent. Given the location of the stricture, the patient underwent distal pancreatectomy and splenectomy. She had an uneventful recovery and was discharged home on postoperative day nine. She remained pain free at the last evaluation, 6 months postoperatively.

Figure 1.— CT scan demonstrating an acute focal narrowing of the distal pancreatic duct, with no contrast seen distal to that point.

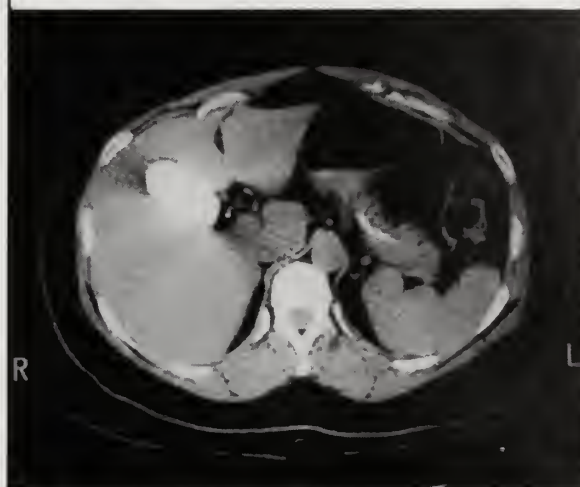


Figure 2.— Gross pathologic specimen showing diffuse pancreatic atrophy distal to the stricture and normal pancreas proximally.



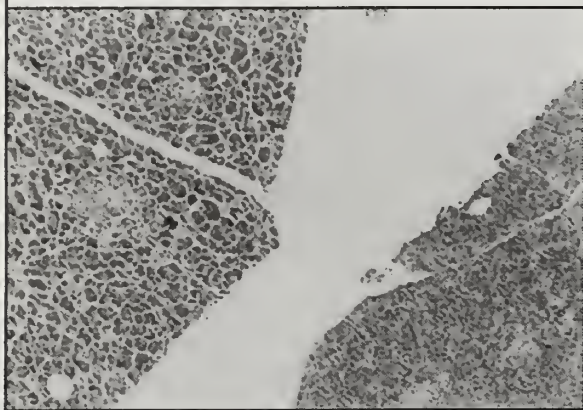
Pathologic examination of our patient's pancreas revealed microscopic and gross changes consistent with obstructive pancreatitis. On gross examination (figure 2), the pancreas distal to the stricture was shrunk, firm and fibrotic in appearance. Microscopically, the pancreas distal the stricture showed diffuse pancreatic atrophy (figure 3). Inflammatory cells were not prominent, nor were any calcifications, inspissated secretions, or saponification identified. Proximal to the stricture, the pancreas was normal.

Discussion

Obstructive pancreatitis is an unusual form of chronic pancreatitis and represents only 5% of cases.¹ This case report demonstrates a classic example. History and physical examination and laboratory examination generally offer few clues. Usually, radiographic evaluation using ultrasound, ERCP, and CT scan are required to elucidate the etiology of pancreatitis. Obstruction may be caused by tumors, inflammation, congenital anomalies, and strictures from previous injury.^{1,2} The clinical presentation of obstructive pancreatitis resembles other forms of chronic pancreatitis, but differs both radiographically and pathologically.

Patchy atrophy of exocrine tissue characterizes nonobstructive

Figure 3.— Histologic specimen stained with hematoxylin and eosin demonstrating the sharp cutoff between normal and fibrotic, atrophied pancreas (100x magnification).



pancreatitis, whereas, diffuse atrophy in the pancreatic tissue distal to the obstruction is more common in obstructive pancreatitis.^{1,3} Protein plugs within the pancreatic duct are also frequently found.

The optimal surgical approach to obstructive pancreatitis has not been studied extensively, but distal pancreatectomy appears to be the best choice.⁴ Since pathologic changes manifest themselves distal to the pancreatic duct stricture, distal pancreatectomy is the procedure of choice to deal with this problem. Nonobstructive forms of chronic pancreatitis affect the pancreas and the pancreatic duct more diffusely and are managed more appropriately with larger resections or side-to-side pancreaticoenterostomies. It is, therefore, imperative to obtain preoperative anatomic and morphologic infor-

mation on the pancreas to determine the most likely form of chronic pancreatitis involved, and thus, the optimal surgical approach.

Right upper quadrant ultrasound to rule out cholelithiasis or choledocholithiasis followed by ERCP and then CT scanning is a logical radiologic approach to this disease process. The need for ultrasound and ERCP seems obvious. However, the addition of CT scanning provides valuable information about pancreatic parenchymal morphology. The CT scan in our patient was largely unremarkable except for the stricture. CT scanning may show, however, alternating areas of stenosis and dilation (the "chain of lakes"), as well as calcifications in nonobstructive pancreatitis. Uniform dilation of the pancreatic duct distal to the stricture without a chain of lakes appearance or calcifications, however, distinguishes obstructive pancreatitis from nonobstructive forms of pancreatitis on CT scan and ERCP.

This case underscores the need for a complete preoperative radiologic workup to include ultrasound, ERCP, and then CT scan to determine the most likely form of chronic pancreatitis involved and, therefore, the best operative approach. We believe that in cases of obstructive pancreatitis, distal pancreatectomy is the optimal surgical procedure.

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Accidental Poisoning in Children with Special Reference to Kerosene Poisoning

L.T. Chun MD*, Honolulu

reprinted from the Hawaii Medical Journal November-December 1951 issue

This study on accidental poisoning in children is the result of a review of cases admitted to the Kapiolani Children's Hospital over a five year period from August 1945 to May 1950. The purpose of this study was to determine the most frequent types of poisoning so that an emergency room could be set up at the Children's Hospital to meet the most common needs. No attempt has been made to determine the best method for managing any one particular type of poisoning, because when the cases were admitted there was no unified study made with this in mind.

The cases presented are those that were admitted to the Children's Hospital, and do not necessarily reflect the most common types that may be seen in private practice or at the local Emergency Hospital.

Observations

The total number of cases admitted was 221 with 3 deaths, a mortality rate of 1.3%. The deaths were due to one each of the following: kerosene, oil of eucalyptus, and water color paint. The age range was from 10 days to 12 years with an average (median) age incidence of 3.8 years. The mode was 2 years: 40 cases occurred at this age, an incidence of 17.8%. The other ages in the order of frequency were: 1.5 years, 24 cases or 10.7%; 1 year, 20 cases or 8.9%; 3 years, 18 cases or 8.03%; 2.5 years, 17 cases or 7.6%. One hundred and forty-nine boys and 72 girls were admitted. There were 3 cases who ingested poisons twice. One was a 2-1/2 year old female who ingested phenolphthalein in the form of "Ex-lax" twice 4 months apart. Another was a 3-year-old male who was first admitted for ingestion of oil of eucalyptus and fourteen months later was admitted for kerosene ingestion. The third case was a one-year-old male who ingested kerosene twice five months apart.

There were 59 types of poisons encountered. To facilitate the discussion of the different types of poisoning, they have been divided into four major groups, namely, medications, chemicals, foods, and plants. The individual poisons encountered are as follows:

A. Medications

1. Oil of eucalyptus, 13 cases; phenolphthalein, 7 cases; barbiturates, 7 cases; salicylates, 6 cases; camphorated oil, 5 cases; rubbing alcohol, 4 cases; thyroid tablets, 3 cases.
2. There were two cases of each of the following: Benadryl; iodine; "Vapor Cresoline"; benzedrine; ethyl alcohol; aconite.
3. There was one case of each of the following: "Antistine;" potassium permanganate; stilbestrol; morphine; mercury; atropine; sulfonamide; mercurochrome.

B. Chemicals

1. Kerosene, 69 cases; arsenic, 17 cases; pine oil, 7 cases; turpentine, 4 cases.
2. There were three cases of each of the following: Cigarette lighter fluid; carbon tetrachloride; ant poison (unidentified).
3. There were two cases of each of the following: Phosphorus, gasoline, water color paint, nicotine, "Clorox," "Flit," lye, inhalation of "Chemtox" (termite fumigation fluid), creosol.
4. There was one case each of the following: Vanilla extract, witch hazel, creoline, "Tintex" dye, nail polish remover, incense sticks, D.D.T., shoe polish, "Borax," "trupine," denatured alcohol, lacquer thinner, camphor crystals, lead, weed poison (unidentified).

C. Foods (spoiled)

1. Butter fish, 7 cases; black sea bass, 1 case; cream puff, 1 case; corned beef, 1 case.

D. Plants

1. Berries (unidentified), 2 cases; nuts (unidentified), 3 cases; fruit (unidentified), 1 case; Dieffenbachia (dumb cane), 1 case.

The most common general treatment employed for the ingested poisons was gastric lavage. Out of the 221 cases admitted, 167 were so treated. Thirteen had vomited prior to the lavage, and of these, it was induced in 7 by home remedies of milk, egg and milk, egg white, or mustard water. Ten were given emetics at home with no success. Most of the cases were treated by the Emergency Hospital before being admitted to the Children's Hospital.

On reviewing the cases, it was found that in most instances, the exact amount of ingested poisons was unknown. The time interval before the patient was seen was usually from one-half hour to one hour. The following is a discussion of the more commonly encountered poisons:

Commonest Poisons

Of the 13 cases of *oil of eucalyptus* ingestion, in 5 it was given as cough medicine by mistake. The most common symptom reported was convulsion, which occurred in 6 cases. Respiratory depression occurred in 3 cases; in 5, no common signs or symptoms were recorded. The symptoms appeared to be related not to the amount ingested but to how soon after ingestion therapy was started. It was noted that those treated within one-half hour presented no unusual findings. The treatment was mainly lavage. The one fatal case of oil of eucalyptus ingestion occurred in an 8 month old infant who was said to have ingested 1 ounce and was not treated till two hours later.

On admission, the child was cyanotic, convulsing, and comatose. The temperature was elevated and he died nine and one-half hours after admission without regaining consciousness. The essential findings at autopsy were "hydrothorax, hydroperitoneum, and acute hemorrhagic peritonitis."

Of the 7 cases of *phenolphthalein* ingestion, 5 were due to "Ex-lax" and 2 to "Feen-a-mint." The symptoms were confined to mild diarrhea. Treatments considered of lavage and, in only 1 case, kapectate and paragoric.

The 7 cases of *barbiturate* ingestion showed drowsiness as the most common symptom. Five were treated by lavage, one case was given caffeine, and one other was given benzedrine.

Of the 6 cases of *salicylate* poisoning, 2 were due to oil of wintergreen, and 4 to aspirin. The 2 cases of oil of wintergreen poisoning showed signs of acidosis on admission and were treated with glucose water and lactate solution parenterally. The one other case showing signs of acidosis on admission gave a history of ingesting 5 grains of aspirin once or twice every hour for one week, through a mistake in following directions. He had a salicylate level of 21.7 mg% on admission.

Of the 5 cases of *camphorated oil* poisoning, only one showed signs of intoxication. The child convulsed shortly after ingestion of the poison and had two more convulsions after admission to the hospital. She was treated by lavage only and given sulfadiazine for an associated nasopharyngitis. The next day she was free of symptoms.

Thirteen of the 17 cases of *arsenic* ingestion were due to cockroach powder and paste containing lead arsenate as the main ingredient. One other was due to rat poison and the three others occurred simultaneously in siblings who drank a garden spray solution containing an arsenic compound. The exact amount ingested and whether the poison was actually swallowed could not be determined with certainty in all the cases. Only those three siblings who drank the garden spray solution showed toxic effects. They complained of vomiting and abdominal pains and were treated with BAL.

There were 7 cases of *pine oil* ingestion. Spiking fever a few hours after ingestion and lasting for about twelve hours was reported in 4 cases. One case had hyperemia and swelling of the mucous membrane of the oropharynx and signs of croup. Every case was treated by gastric lavage.

Three of the 4 cases of *turpentine* ingestion developed abnormal signs and symptoms, including fever of short duration. One of them had pneumonia, which was confirmed by x-ray. The other had convulsions, became cyanosed, and had urinary retention. He also developed polymorphonuclear leukocytosis.

Two of the 3 cases of *cigarette lighter fluid* ingestion developed fever for three days. One of the cases also showed lethargy and had findings of pneumonia both by physical examination and x-ray. Blood counts on this patient taken on admission and two days later were normal. Four days after admission, he had an anemia of 2.9 million red cells and 9 gram of hemoglobin which responded favorably to blood transfusion.

Two of the 3 cases of *carbonyl tetrachloride* ingestion had fever and leukocytosis on admission. One of them became extremely ill with jaundice and anemia of 1.11 million red cells, 19% hemoglobin, 21% nucleated red cells, and 59,000 leucocytes. The urine

showed 3+ albumin and was normal six days later. The anemia was corrected with two blood transfusions. There was no record of any liver function tests.

Of the 7 cases of poisoning due to spoilage of butter fish, 5 involved children who were at the same party. The outstanding symptoms were nausea, vomiting, and diarrhea. No specific treatment was employed. The 2 other cases were siblings who had similar symptoms and were admitted a day before the other five. The other cases of food poisoning due to spoilage all had similar symptoms of nausea, vomiting, and diarrhea.

The fatal case of *water color paint* ingestion involved a 17-month-old girl who ingested an unknown quantity of yellow, green, and blue water color paint. She was admitted to the hospital eight hours later in a semicomatose condition, having rapid and shallow respirations, vomiting, and bloody diarrhea. She was treated with parenteral fluids but failed to respond and died five hours later following an attack of convulsions. The only significant finding from the coroner's report was acute pulmonary edema. The one other case of water color paint ingestion showed no unusual symptoms. He was lavaged within an hour after ingestion of the water color paint.

Less Common Poisons

It might be of interest to mention briefly some of the outstanding findings of the other cases of poisoning that were less frequently encountered.

One of the cases of *iodine* poisoning had a mild burn of the lip. The 2 cases of *benzedrine* poisoning showed hyperexcitability which was controlled with barbiturates. Whiskey and beer accounted for the 2 cases of *ethyl alcohol* poisoning. Inebriation was the presenting symptom. Two of the 4 cases of *rubbing alcohol* poisoning were drowsy, flushed, and had fever. One of them ingested the alcohol, and the other had the alcohol given as an enema by accident. One of the patients who had no symptoms was a 10 day old infant who had the alcohol poured into his mouth by an older sibling. The 1 case of *morphine* poisoning received 1/2 grain by accident and became extremely drowsy. The case of *sulfonamide* poisoning developed urinary obstruction from precipitation of the sulfonamide crystals in the urethra. He was successfully treated by catheterization.

One of the cases of *ant poison* ingestion had a temperature elevation of 102° for eight hours. The 2 cases of *gasoline* ingestion had temperature elevations. One of them had transient rales in the chest. One of the cases of *nicotine* ingestion was admitted in a collapsed condition. He was successfully treated by gastric lavage. Both cases of "*Clorox*" ingestion had second degree burns of the oropharynx. No systemic effect was noted. One of the cases of "*Flit*" ingestion was admitted in a shocked condition with heavy grunting respirations. The other case had no systemic effects but experienced coughing and choking. Only one of the cases of *lye* ingestion was reported to have burns of the oropharynx with febrile reaction. No further complication developed. The two siblings who were involved in the termite fumigating fumes (*Chemtox*) had fever, wheezing, labored respirations, and polymorphonuclear leukocytosis. Inebriation was the only symptom noted with the *vanilla extract* ingestion. The child who ingested the *nail polish remover* was said to have had difficulty in breathing immediately after the accident but had no unusual symptoms when seen at the hospital an hour later. Cyanosis of the nail beds and slight temperature elevation resulted

from the ingestion of unknown quantities of *shoe polish*. The patient was lavaged on admission and on discharge two days later was entirely well. The child ingesting the “*Borax*” complained of a stomach ache but was symptom free after the gastric lavage. The case of *lead* poisoning occurred in a 1-1/2-year-old boy who gave a history of ingesting paint over a period of time. He was admitted because of convulsions. X-rays showed deposition of heavy metal at the ends of long bones. Sodium luminal was used for controlling the convulsions. No specific deleading procedure was carried out.

On of the cases of *berry* poisoning had nausea an vomiting on admission but was not severely ill. The cases of *nut* poisoning involved 2 brothers and a friend. They all had vomiting and diarrhea immediately after ingesting the nuts. The case of *fruit* poisoning had nausea and vomiting. The case of *dieffenbachia* poisoning had abdominal pains only.

The cases not discussed presented no abnormal signs and symptoms. This in itself does not mean that the poisons were harmless. Many factors are responsible for this, such as, the small amounts taken, the poisons not being actually swallowed, and the early institution of treatment, mainly, gastric lavage.

Kerosene poisoning

There were 69 cases of kerosene ingestion, an incidence of 31.3%. The age range was from 11 months to 8 years with an average age of 21 months. The mode was 2 years—14 cases occurred at this age group, an incidence of 20.3%. The other ages in the order of frequency were: 1.5 years, 13 cases or 18.8%; 1 year, 11 cases or 15.9%. There were only two children over 3 years of age, a 4-year-old and an 8-year-old. The age incidence emphasizes the fact that children at the “age of exploring” are the ones most likely to get into trouble. In most instances, the accident occurred when the kerosene was kept carelessly in open cans, soda pop bottles, or containers with leaking spigots. The exact amount of kerosene ingested could not be determined accurately in most instances; estimates varied from a sip to a mouthful.

Gastric lavage was employed in 62 of the 69 cases. Three had spontaneous vomiting prior to admission and in four others there was no record of either lavage or vomiting. Sixteen patients received penicillin for prophylaxis and for treatment of pneumonia; one received sulfonamide alone, and two patients received both penicillin and sulfonamide. Plain water was used for gastric lavage in 54 cases and the other 8 were lavaged with sodium bicarbonate solution. In 12 cases, the gastric lavage was followed by the instillation of some medication—8 received milk of magnesia, 2 each received mineral oil and plain milk, and 1 each received olive oil and magnesium sulfate.

The most frequent complications are as listed in Table 1. An attempt has been made to group them into cases who were lavaged and those who were not. Because of the insufficient number of cases in the group not lavaged, no conclusions can be drawn from study as to the frequency of complications between those who were lavaged and those who were not. There were 12 cases (17.3%) who presented no symptoms, and these were all in the group of cases who were lavaged.

The fever was observed usually after the child had been in the hospital from four to eight hours and was of short duration, lasting twelve to twenty-four hours. The temperature varied from 101° to

104°. Those cases with pneumonia had longer duration of fever lasting from three to five days.

The coughing and choking recorded were those observed at the time of hospitalization. More detailed histories might have revealed

Table 1.—Complications from Kerosene Poisoning

Complications	Total No.	Percent of Total (69)	Lavaged (Total 62)		Not Lavaged (Total 7)	
			No.	%	No.	%
1. Fever	52	75.3	44	70.9	7	100.0
2. Couging & Choking	15	21.7	11	17.7	4	57.0
3. Pneumonia	13	18.8	10	16.1	3	42.8
4. Vomiting	10	14.4	10	16.1	—	—
5. Lethargy	9	13.0	9	14.5	—	—
6. Elevated WBC & Polys	6	8.6	5	8.0	1	14.3
7. Death	1	1.4	1	1.6	—	—

these symptoms to be prevalent in the other cases also.

In 9 instances, the pneumonia was confirmed by x-rays, which showed a peribronchial infiltration in the lower lobes. The physical findings recorded were slight impairment to percussion and moist rales over the involved areas.

Most of the cases of vomiting occurred spontaneously after ingestion of the kerosene, though some were induced at home with emetics.

The lethargy ranged from drowsiness of short duration to unconsciousness of two to four hours’ duration. One case was reported as begin semi-comatose for eight hours.

Every case had a routine CBC on admission. Only 6 showed an elevated white count, ranging from 15,000 to 33,000, neutrophilias ranging from 52 to 76%. Only 1 case developed anemia which occurred six days after the ingestion of kerosene and responded well to blood transfusion.

The one fatal case of kerosene ingestion occurred in a 1-1/2-year-old child. The exact amount ingested was not known. She was lavaged at the Emergency Hospital about an hour after the onset of the accident and on admission to the Children’s Hospital, the child was unconscious and gasping for breath. She expired forty minutes after admission.

Discussion

It is beyond the scope of this paper to discuss all the different types of poisoning as each type would deserve a full paper discussion. The reader is referred to the excellent discussion of this subject by Dr J. M. Arena in the *Ciba Clinical Symposia*.¹ However, since kerosene was the most common one encountered, a brief review of the literature on kerosene poisoning may be in order.

The subject of pulmonary manifestations following kerosene ingestion is always of considerable interest. Pneumonia occurs more frequently than we are led to believe. Lesser et al.² x-rayed 22 patients following kerosene ingestion and found 77% had signs of pneumonia. Of these, only 24.2% showed physical signs which appeared about four hours after ingestion. Reed et al.³ followed 19 cases of pneumonia due to kerosene for six months to four years. They found no evidence of residual damage to the respiratory

systems. The pulmonary changes resolved in two weeks. The cases at the Kauaikeolani Children's Hospital were not x-rayed routinely, hence, the incidence of pneumonia may have been higher than 18.8%.

The institution of gastric lavage as treatment in kerosene ingestion is controversial. The issue is about the mode of developing pneumonia. Lesser et al.², Waring,⁴ and Reed et al.³ have shown by experiments with rabbits that pneumonia is caused by direct aspiration of kerosene into the lungs and that no pneumonia was observed when kerosene was instilled directly into the stomach. Rabbits were used in the experiment because they do not vomit. Deichman et al.⁵, on the other hand, have shown that pulmonary changes can occur without direct aspiration of kerosene into the pulmonary system. When kerosene is introduced directly into the stomach, pulmonary changes can occur from absorption into the blood stream.⁵

In the above experiments, all mentioned that drowsiness occurred when large amounts of kerosene were instilled into the stomach. Degenerative changes in the liver, kidneys, lungs, and heart have also been described.⁵ At a recent clinical conference at the St. Louis Children's Hospital,⁶ the occurrence of mediastinal and subcutaneous emphysema and pneumothorax in kerosene poisoning have been pointed out as not being unusual.

The observations made on the complications of kerosene poisoning in this study are similar to those made by others. Leukocytosis is the only exception. While this study reported an incidence of 8.6%, Reed et al.³ report leukocytosis in 65% of their cases.

Lead Poisoning

Because lead poisoning in children is unlike that in adults, brief mention will be made of another case of lead poisoning which occurred after this study was completed. The case was that of a 2-year-old girl admitted because of an acute onset of convulsions not associated with fever. A careful history revealed the fact that the child had been eating paint off the wall over a period of 2 months. A flat x-ray of the abdomen showed scattered dense shadows in the shape of paint peelings. Blood level for lead was 0.8 mg%.

Increased intracranial pressure and cerebral edema are the outstanding features of lead poisoning in children. Therefore, it is hazardous to do lumbar punctures on patients with acute lead encephalopathy. In the chapter on lead poisoning in Mitchell and Nelson's *Textbook of Pediatrics*⁷ it is stated that approximately one-half of the infants and small children have encephalitic manifestations and among these the mortality is about 25%. Of those who recover, about one-third are left with permanent neurologic sequels. Encephalitis with convulsions may be precipitated in a quiescent case by the release of the lead from the bones during an intercurrent acute infectious or metabolic disturbance. Because of the permanent residual effects that may develop from lead poisoning, the public should be educated to use lead-free paint in all house interiors and toys.

General Measures

At the Conference on Poisoning at the Duke Hospital⁸ in 1947, it was said that 400 different types of poisons kill over 500 children in America annually. Caustic alkali poisoning was said to be the most frequent followed by kerosene. It was emphasized that many of the cases of poisoning were preventable and the responsibility is with

the parents. They suggested the following emergency measures in handling acute poisonings.

1. Identify the poison as soon as possible.
2. Evacuation of the poison from the stomach by lavage or emetic except in cases of kerosene and caustic alkali poison.
3. Antidoting the residual poison in the stomach when possible.
4. Antagonist when available.
5. Symptomatic treatment when indicated.
6. When the nature of the poison is unknown, give universal antidote of: pulverized charcoal 2 parts, tannic acid 1 part, magnesium oxide 1 part. The pulverized charcoal may be given in the form of burnt toast, the tannic acid in the form of strong tea, and the magnesium oxide in the form of milk of magnesia. The first will absorb phenol and strychnine, the second will precipitate alkaloids, glucosides and metals, and the last will neutralize acids.

Summary

A study of 221 cases of accidental poisoning admitted to the Kauaikeolani Children's Hospital over a 5 year period is presented. Fifty-nine different poisons were encountered.

There were twice as many boys as girls admitted.

The age of greatest frequency was 2 years, followed by the age groups of 1-1/2 years, 1 year, 3 years, and 2-1/2 years.

Kerosene poisoning is the most common, and 69 cases of kerosene poisoning are presented in detail with a brief discussion of the literature.

Other more common types of poison are: arsenic compounds, oil of eucalyptus, phenolphthalein, barbiturates, pine oil, salicylates, and camphorated oil.

There were 3 deaths, due to one each of the following: kerosene, water color paint, and oil of eucalyptus.

Conclusions

This study probably does not give a complete picture of the most common poisons encountered in the Hawaiian Islands. In order to have this study complete, further information should be obtained from the practicing physicians and the cases of poisoning admitted to the Emergency Hospital should be reviewed.

There are, however, two important points this study emphasizes:

1. Many of the cases of accidental poisoning are preventable.
2. We must never underestimate the 18 month to 3-year-old child's knack for getting into trouble, and we recognize his natural curiosity for exploring the unknown through his mouth.

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Who Calls the Hawaii Poison Center?

Debbie Ahina, RN, BSN

The types of callers and calls received by the Hawaii Poison Center's telephone triage service during the last fiscal year (July 1, 1996 through June 30, 1997) are described. A comparison to national data for human toxic exposures is provided. Methods included a review of Hawaii Poison Center statistics¹, the American Association of Poison Control Centers annual report², and retrospective recall of cases.

Introduction

The Hawaii Poison Center provides poison information services to the people of Hawaii, the Pacific Basin and Pacific Rim. The center operates a 24-hour hotline, 365 days a year (on Oahu phone 941-4411 or 911, and neighbor islands toll-free 1-800-362-3585). Specially trained registered nurses perform telephone triage, providing quick assessment and treatment of poison exposures for both lay people and medical professionals. Medication identification for imprinted tablets and capsules, and general information is available over the phone. Community poison prevention talks and professional education workshops on toxicology are conducted.

The Hawaii Poison Center received almost 12,000 calls during the last fiscal year. The majority of calls 10,297 (87%) were from the general public rather than medical professionals. Private individuals such as anxious parents whose children may have accidentally been poisoned called most frequently, followed by police requesting identification of confiscated medications, as well as businesses, schools, and other government agencies where a toxic exposure has occurred. (Figure 1) The remaining 1,585 calls (13%) were from medical professionals caring for the poisoned patient.

The Hawaii Poison Center assists medical professionals with assessing toxicity and recommending appropriate treatment. Information is provided over the phone and via fax. Emergency department calls are the most frequent followed by calls from other medical professionals, usually involving patients who directly called their personal physician, physicians' office, or clinic when a suspected poisoning occurred. (Figure 2)

A Profile of Hawaii Poison Center Calls

As expected, the majority of Hawaii Poison Center calls were from Oahu. For the neighbor islands, the Poison Center provides a particularly crucial service for callers where the closest emergency department or even a doctor's office can be many miles away. (Figure 3)

On Oahu, most of the calls came from the densely populated Honolulu (from Hawaii Kai to Salt Lake/Moanalua) 50%, and Leeward (from Aiea to Mililani/Wahiawa and to Waianae) areas 32%. The remaining calls were from the Windward side (Kailua, Kaneohe, Waimanalo) 15%, and the North Shore (from Kaaawa to Haleiwa/Waialua) 3%.

Human poison exposures accounted for most of the Hawaii

Poison Center calls. These commonly involve ingestion, inhalation, eye or dermal contact with a possible or known poisonous substance. Remaining exposures include bites or stings from venomous insects and marine organisms.

The center also received informational calls which are general questions not involving an actual exposure, frequently prevention oriented in nature, and related to the safe handling of toxins. Examples include "can I use oleander flowers to make a lei and garnish food dishes?" or "how do we dispose of four gallons of chemicals that have been stored under the house for years?" Requests for medication identification are usually received from the local police departments for confiscated medications. Over the phone, the Hawaii Poison Center can identify most tablets or capsules with imprinted numbers and letters.

Hawaii Pediatricians' Perspective

"Countless times I've received desperate calls from parents of patients who have ingested the gamut of poisons from over-the-counter to prescription drugs, from solvents to dessicants. Each and every time I've relied on the Hawaii Poison Center - seconds away by phone, manned with calm professionalism, supported by the exhaustive information bank that is the Poisindex. And each and every time I was thankful the facility survived the variable winds of funding.

"What the Poison Center provides this community is more than the obvious financial benefits of reducing health costs and improving health care delivery. The center has created for these islands an intangible, but very real sense of security - a civic security blanket. It's something that money can't buy."

Jeffrey Lim, M.D., FAAP

"As a pediatrician in a solo private practice, the Hawaii Poison Center's specially trained and dedicated 24-hour staff provides me and my patients a means of immediate telephone consultation regarding any issues of medical toxicology. The Hawaii Poison Center's forty years of experience with "local" poisonings, as well as access to texts, files, and computerized databases makes it the best source of information and guidance on poisoning. Not only does the center provide an effective means of disseminating information, it assists with medical consultation, and arranging for follow-up, therefore reducing unnecessary hospital visits."

Michael Sia, M.D., M.P.H.

Figure 1.—Calls from General Public (FY 96-97)

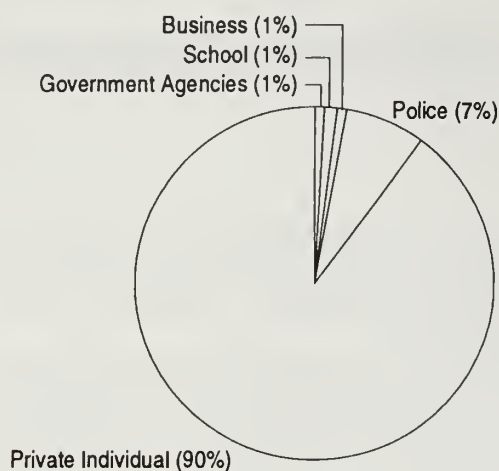


Figure 2.—Calls from Medical Professionals (FY 96-97)

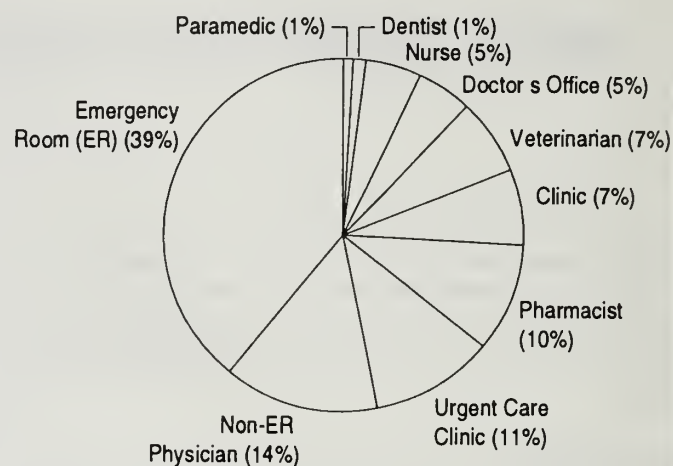


Figure 3.—Calls by Island (FY 96-97)

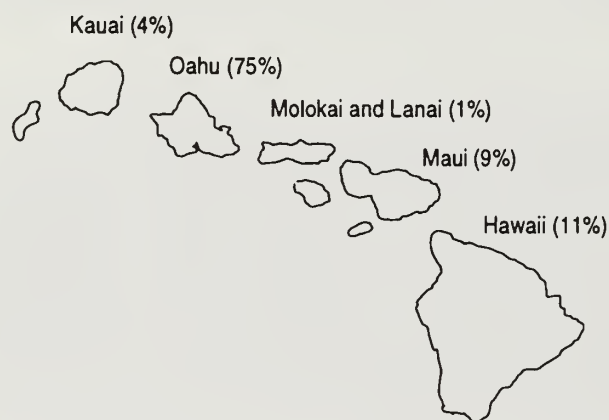


Figure 4.—Types of Calls (FY 96-97)

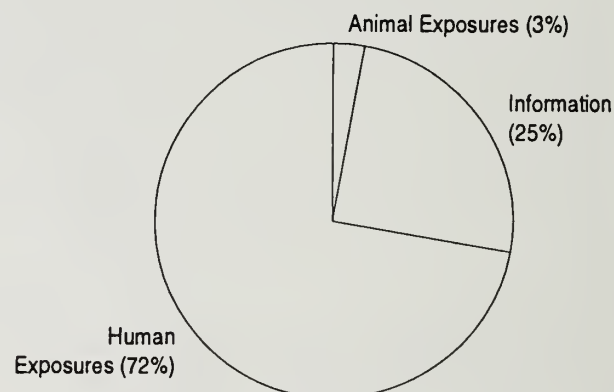


Table 1.—Age Gender of Human Poison Exposures

	Hawaii%	National %
Age		
5 years or less	39.7	52.8
6 - 12 years	5.9	6.8
13 -19 years	5.6	7.4
Adults > 20 years	37.5	27.3
Unknown	11.3	5.9
	100%	100%
Sex		
Female	43.8	50.9
Male	43.0	48.5
Unknown	13.2	0.5
	100%	100%

Table 2.—Reason for Human Poison Exposures

	Hawaii%	National %
Unintentional	79.4	85.7
Intentional	11.3	11.3
Unknown	9.2	0.3
Other	0.0	2.7
	100%	100%

Table 3.—Route of Exposure for Human Poison Exposures

	Hawaii%	National %
Ingestions	61.6	74.0
Bites and stings	12.8	3.8
Dermal	8.9	8.1
Inhalation	6.2	7.0
Ocular	5.7	5.9
Parenteral	0.2	0.3
Other	0.2	0.4
Unknown	4.4	0.4
	100%	100%

Table 5.—Severity of Human Poison Exposures

	Hawaii%	National %
Non-toxic	10.7	18.3
Low-moderate toxicity	88.0	81.1
Highly toxic	1.3	0.4
	100%	100%

The remaining calls were from pet owners or veterinarians regarding poisoned animals including dogs, cats, rabbits, birds, turtles, pigs, chicken, and horses. Some examples of calls are "my bird drank bleach from a coffee stained mug" or "my dog may have eaten rat poison." Animal toxicology information is provided to the veterinarian as available. (Figure 4)

A Comparison Of Hawaii And National Human Poison Exposures

A comparison of human poison exposures for the Hawaii Poison Center (8,666 cases) and the American Association of Poison Control Center's national data (2,155,952 cases) is presented.

A summary of age and gender is displayed in Table 1. As expected the majority of both Hawaii and national cases involved children 5 years of age or less. Differences are noted with Hawaii having a higher incidence of adult poisonings, and national poisonings occur much more frequently in children age 5 years old and less. Hawaii and national gender distribution was nearly equal.

Unintentional (accidental) poisonings outnumbered intentional (suicidal gestures or experimentation) poisonings for both Hawaii and national exposures (Table 2).

Ingestions accounted for the vast majority of exposure routes for both Hawaii and national cases (Table 3). However Hawaii has a much higher incidence of bites and stings (12.8%) compared to the national data (3.8%). Hawaii's unique tropical environment surrounded by water results in more outdoor and ocean activities, and therefore increased exposure to venomous insects and marine organisms.

Table 4.—Substances Involved in Human Poison Exposures

	Hawaii%	National %
Medications (prescription, over-the-counter)	49.3	29.5
Household products (cleaning and personal care (cleaning and personal care products, hydrocarbons)	34.8	22.0
Envenomations (bites, stings)	15.1	4.4
Pesticides (includes herbicides, rodenticides)	7.7	4.0
Plants	6.9	5.3
Food products, food poisoning	5.9	3.4
Industrial products, chemicals	2.5	2.5
Liquor	1.1	2.6

NOTE: One poisoning exposure may involve multiple substances. Percentages are based on the total number of human exposures rather than the total number of substances.

(Table 4) presents the most common substance categories listed by frequency of exposures. While medications, followed by household products are the most common, the incidence of these types of exposures is much greater in Hawaii. Again bites, stings, and pesticide exposures occur more frequently in Hawaii.

The vast majority of both Hawaii and national cases were low to moderate toxicity (Table 5) in which the patient is likely to develop symptoms unless treatment is undertaken to minimize the exposure. Based on the type of exposure, Poison Center staff advise the caller on first aid, home management, and/or referral for further medical care).

The next group of exposures were non-toxic in which the caller was reassured that the exposure was not dangerous. Poison Center staff educates these callers on poison prevention and poison-proofing the home. Some examples are silica gel dessicant, crayons, and balloons. Possible foreign body obstruction is a risk and is assessed.

The remaining exposures were highly toxic, life and health threatening, requiring referral to the nearest emergency department or ambulance. The Poison Center then calls the emergency department with details and stands by to assist the emergency department with toxicology information. These cases are often suicidal gestures.

Conclusion

The Hawaii Poison Center receives a variety of calls from urgent human poison exposures to general informational questions and pet exposures. Overall, the human poisoning cases reported to the Hawaii Poison Center are similar to national trends, with some toxins unique to Hawaii.

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Hawaii Poison Center Forty Years of Saving Lives and Health Costs

Willow S. Morton, MSW*

The Hawaii Poison Center was established because poisoning was a significant public health problem in the 1950s. The history and status of the Center, in the context of national trends and key issues in poison control public health infrastructure, is reviewed.

Introduction

Forty five years ago, when the first poison control center opened in Chicago, poisonings were a leading cause of injury in children.¹ The success of early centers in saving lives by providing physicians with immediate and accurate information initially fueled a rapid expansion of poison control centers (PCCs) across the US. Later, as efforts to improve quality led to regionalization, poison control centers consolidated while expanding their geographic catchment areas to millions of people.²

Unintentional poisoning among children today continues to be a significant public health problem. Although the number of pediatric deaths has declined dramatically since the passage of the Poison Prevention Packaging Act of 1970³, the majority of poisonings continue to be in children under 5 years and still occur in sizable numbers—nationally 53% of the 2.2 million poison exposures reported in 1996.⁴

Poison centers today are in a critical financial condition. Generally funded via a patchwork of state and country government funds, hospitals, medical schools, and private donations, poison centers have faced a decline in funding due to various budget cuts. Closings and consolidations have resulted in a decline in poison centers to 87 in 1994.³

The Hawaii Poison Center, established in 1957 by the physician community in response to child poisonings, reflects mainland trends on poison control. The history of poison control on the mainland and in Hawaii is traced in this article and significant issues for the future of poison control in Hawaii are identified.

Methods

A literature review of various medical journal articles, congressional hearing reports, special studies and correspondence from the American Association of Poison Control Centers was conducted. Key informants were identified through inquiries of members of the Hawaii Chapter of the American Academy of Pediatrics and review of the Hawaii Poison Center's business documents. These individuals were contacted for phone interviews on the history of the center and poison control management in Hawaii.

History

In 1951, Honolulu pediatrician L.T. Chun published an article in the *Hawaii Medical Journal* and *Interisland Nurses' Bulletin* entitled, "Accidental Poisoning in Children/With Special Reference to Kerosene Poisoning." Two hundred and twenty-one pediatric cases admitted to Kapiolani Children's Hospital over a five-year period from August 1945 to May 1950 were reviewed, and of the 59 poison agents noted, kerosene was the most common poison. Three deaths were reported: one each by kerosene, water color paint, and oil of eucalyptus.⁵

The study reflected a significant public health problem — accidental poisonings — both in Hawaii and nationally. In 1950, when the American Academy of Pediatrics Committee on Accident Prevention was formed, poisoning was a leading cause of injury in children. In 1952, the Academy conducted a survey revealing that 51% of reported child accidents were related to poisonings.⁶ Shortly thereafter in 1953, the first poison control center opened its lines in Chicago, offering speedy and lifesaving access to toxicology information in cases of exposure. Center openings in several other cities around the country soon followed. In 1956, the National Clearinghouse for Poison Control Centers was established under the auspices of the US Public Health Service's Accident Prevention Program, serving as a collection agency for information on poisons and potential poisons and compiling data from individual poisoning reports.⁶

The Hawaii Poison Center was established in 1957. The Honolulu Pediatric Society, then a small organization of some 20 or so pediatricians, advocated for poison control as a key child health issue in Hawaii. (Phone interview, L.T. Chun, MD, 9/30/97.) Dr

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The Hawaii Poison Center was established in 1957 at Kauaikeolani Children's Hospital

Donald Char, pediatrician and full time Director of Medical Education for Kauaikeolani Children's Hospital, garnered support from Dr Kay Edgar, Chief of Maternal and Child Health at the State Department of Health, and other stakeholders. Regarding management of poisonings as integral to the training of pediatricians, Dr Char organized the Poison Control Center, as it was then known, under the Department of Medical Education as a service to physicians and other medical professionals. (Phone interview, Donald Char MD, 11/13/97.) With limited funds he brought together toxicology reference materials and trained the pediatric residents who then became responsible for answering the phone line 24 hours a day. The residents relied on textbooks and publications on product dangers, and in the first year fielded 286 phone calls. (Hawaii Poison Center 1984 Annual Report.) Mr. Will Henderson, Kauaikeolani Children's Hospital administrator at the time, commandeered a large closet adjacent to the emergency room and installed a phone line and furniture, giving the center an identity and visibility. (Interview, Will Henderson, 10/19/97.)

Pediatrician Richard Ho, who became involved with the Poison Center as a resident, subsequently became its first medical director. Majoring in chemistry before going on to medical school, Ho began to build up the technical reference library, wrote articles periodically for the *Hawaii Medical Journal*, and tirelessly carried his poison prevention educational efforts into the schools, health fairs, and medical conventions.

After 20 years as medical director, Ho recruited recently retired Dr Rea Chittenden, who had previously been involved in the Los Angeles Poison Center. By then the Children's Hospital had moved to its present Punahou Street location via the merger with Kapiolani Maternity and Gynecological Hospital. Chittenden, as medical

director, was supported by the first administrative director, Margaret Lezereti, a nurse. Following Dr Chittenden's death, Dr Gwen Naguwa became the medical director. (Phone interview, Jane Kagihara, RN, 11/21/97.)

In 1974, Jane Kagihara, RN succeeded Lezereti. The advent of state funding via grant-in-aids had made possible 24 hour dedicated staffing by trained nurses. Throughout her thirteen year tenure Kagihara lobbied the legislature to stabilize state funding, applied for corporate grants, implemented the certification of the center's staffing, and ultimately opened the lines of the center to the general public, as many of the key centers on the mainland were doing. By 1979, the center was fielding nearly 7000 calls per year. (1984 Annual Report.)

In September 1980, the center installed a toll-free line to the Neighbor Islands, as only 3% of the calls came from Maui, Kauai, and Hawaii Counties. As a result, call volume jumped by 24%. And by 1983, neighbor island calls climbed to approximately 15% of calls. (1984 Annual Report.) Because of the growth in call volume as well as more extensive toxicology information available, the center computerized its documentation and clinical databases to improve services. (Kagihara)

The Hawaii Poison Center's history closely parallels the trends of mainland poison centers. In the decades of the sixties and seventies, heralded by pediatric groups, public health agencies, hospitals and community organizations, financial support and the number of centers in the US grew steadily to a peak of 661 in 1978.² Based typically in emergency rooms or hospital pharmacies, the centers were staffed by medical personnel with no special training or expertise in toxicology and limited information resources. By the late 1970s, with financial assistance from the Emergency Medical

Table 1.—Historial Timeline for Poison Services

1950	American Academy of Pediatrics forms Committee on Accident Prevention, leading to identification of poisoning as a key public health issue.
1953	Chicago Poison Control Center opens.
1956	National Clearinghouse for Poison Control Centers established.
1957	Hawaii Poison Control Center established.
1970	Poison Prevention Packaging Act passed by Congress.
1973	Emergency Medical Services Act passed by Congress
1978	Peak number of 661 centers reached nationwide, 100% coverage of U.S. population achieved.
1980s	Decline in centers begins due to regionalization and funding pressures.
1994	Congressional hearings held on the financial plight of poison control centers.
1995	Hawaii Poison Center loses state funding.
1997	Health and Human Services report to Congress regarding federal assistance to stabilize poison centers.

Services Systems Act of 1973, efforts to improve the quality of poison control services in the US were underway. These efforts led to the development of national standards for poison centers and a certification process to assure compliance to these standards. By 1978, when the number of centers peaked, nearly 100% coverage of the US population had been achieved.²

In the 1980s, a trend toward regionalization resulted in a rapid decline in the number of poison centers, as small local centers combined to serve larger geographic areas, generally leading to improved quality, better economies of scale, and increased call volume. By 1983, the number of US poison control centers had dropped to 395.² In 1994, when Congressional hearings commenced 87 centers remain.³ The trend toward regionalization also meant that benefits were provided to a wider community—extending well beyond the revenue base of the sponsoring institutions.

Critical Condition of Poison Services Today

In March 1994, Congressional hearings were held to discuss the plight of PCCs.³ Economic pressures and escalation of health care costs had destabilized centers such that only 87 still survived in 1994. The largely voluntary and private funding arrangements of poison control centers was unstable, and centers needed to deal with multiple funders and donors, none of whom felt indispensable. And in a managed care environment in which purchasers of health care services now aggressively seek the lowest price for care, hospitals and academic medical centers, the traditional sites for PCCs, must keep costs low to compete, a feat particularly difficult for teaching hospitals.³

In follow-up to the Congressional Hearings, the Secretary of Health and Human Services was asked to report back to Congress on mechanisms for stabilizing poison center services in the United States.² The first report, by the Poison Control Center Advisory Work Group of the Centers for Disease Control and MCH/Health Resources and Services Administration, recommends immediate federal assistance, six fundamental initiatives essential to a redesigned poison control system that maximizes economies of scale, under oversight of the Department of Health and Human Services, and use of a Robert Wood Johnson study to redesign the US poison control system.² Whether Congress will act in response to the crisis of funding and fragmentation of the system remains to be seen.

In Hawaii, similar economic pressures resulted in state government defunding of its Center at the end of 1995. Kapiolani Medical Center for Women and Children, a tertiary teaching facility, continues to underwrite the program today, with financial support from other major medical centers and health corporations throughout the state, such as Kaiser Permanente, and other corporate donors. A community advisory board, composed of health care professionals, business executives, and consumers, was formed to guide the center in its mission of service and education, and assist with fundraising.

The threatened closure, however, resulted in a significant drop in calls from 13,505 in fiscal 1995 to 11,849, over 12%, in the following year. This reflects a penetrance level of slightly more than 9 calls per 1000 population, versus the recommended 15 calls per thousand benchmarked against longstanding certified poison control centers with well established community education and outreach programs.² Fearful that the decline in calls may increase the level of harm from exposures and increase overall health care costs, especially those stemming from emergency room visits for exposures which could be managed at home, the Hawaii Poison Center will redouble public awareness and education efforts for its yearlong fortieth anniversary celebration. At the same time, the Center will also increase fundraising efforts to address immediate financial shortfalls, as well as long term fund development.

Summary

In this era of health care reform, as harm reduction, prevention, and other public health strategies become ever more important, the Hawaii Poison Center continues to play a significant role in improving the quality of health and reducing health care costs for Hawaii. Patterned after centers on the mainland, the center's history parallels mainland trends in poison management services. After 45 years of service, the key issue facing centers today is survival, as the funding for centers erodes and become ever more fragmented and vulnerable to economic pressures.

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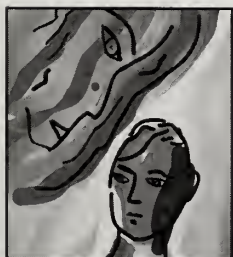
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The use of antibiotic agents may be associated with the overgrowth of nonsusceptible organisms including fungi. If this occurs, discontinue use and take appropriate measures.

Avoid contact with eyes and all mucous membranes.

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1. This medication is to be used as directed by the physician. It is for external use only. Avoid contact with the eyes, nose, mouth, and all mucous membranes.

2. This medication should not be used for any disorder other than that for which it was prescribed.

3. Patients should not use any other topical acne preparation unless otherwise directed by physician.

4. Patients should report to their physician any signs of local adverse reactions.

5. BENZAMYCIN® Topical Gel may bleach hair or colored fabric.

6. Keep product refrigerated and discard after 3 months.

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Data from a study using mice known to be highly susceptible to cancer suggests that benzoyl peroxide acts as a tumor promoter. The clinical significance of this is unknown.

No animal studies have been performed to evaluate the carcinogenic and mutagenic potential or effects on fertility of topical erythromycin. However, long-term (2-year) oral studies in rats with erythromycin ethylsuccinate and erythromycin base did not provide evidence of tumorigenicity. There was no apparent effect on male or female fertility in rats fed erythromycin (base) at levels up to 0.25% of diet.

Pregnancy: Teratogenic Effects: Pregnancy CATEGORY C: Animal reproduction studies have not been conducted with BENZAMYCIN® Topical Gel or benzoyl peroxide.

There was no evidence of teratogenicity or any other adverse effect on reproduction in female rats fed erythromycin base (up to 0.25% diet) prior to and during mating, during gestation and through weaning of two successive litters.

There are no well-controlled trials in pregnant women with BENZAMYCIN® Topical Gel. It also is not known whether BENZAMYCIN® Topical Gel can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. BENZAMYCIN® Topical Gel should be given to a pregnant woman only if clearly needed.

Nursing Women: It is not known whether BENZAMYCIN® Topical Gel is excreted in human milk after topical application. However, erythromycin is excreted in human milk following oral and parenteral erythromycin administration. Therefore, caution should be exercised when erythromycin is administered to a nursing woman.

Pediatric Use: Safety and effectiveness of this product in pediatric patients below the age of 12 have not been established.

ADVERSE REACTIONS

In controlled clinical trials, the total incidence of adverse reactions associated with the use of BENZAMYCIN® Topical Gel was approximately 3%. These were dryness and urticarial reaction.

The following additional local adverse reactions have been reported occasionally: irritation of the skin including peeling, itching, burning sensation, erythema, inflammation of the face, eyes and nose, and irritation of the eyes. Skin discoloration, oiliness and tenderness of the skin have also been reported.

DOSE AND ADMINISTRATION

BENZAMYCIN® Topical Gel should be applied twice daily, morning and evening, or as directed by a physician, to affected areas after the skin is thoroughly washed, rinsed with warm water and gently patted dry.

How Supplied and Compounding Directions:

Size (Net Weight)	NDC 0066-	Benzoyl Peroxide Gel	Active Erythromycin Powder (In Plastic Vial)	Ethyl Alcohol (70%) To Be Added
11.65 grams (as dispensed)	0510-05	10 grams	D 4 grams	1.5 mL
SAMPLE				
23.3 grams (as dispensed)	0510-23	20 grams	D 8 grams	3 mL
46.6 grams (as dispensed)	0510-46	40 grams	1.6 grams	6 mL

Prior to dispensing, tap vial until powder flows freely. Add indicated amount of ethyl alcohol (70%) to vial (to the mark) and immediately shake to completely dissolve erythromycin. Add this solution to gel and stir until homogeneous in appearance (1 to 1½ minutes). BENZAMYCIN® Topical Gel should then be stored under refrigeration. Do not freeze. Place a 3-month expiration date on the label.

NOTE: Prior to reconstitution, store at room temperature between 15° and 30°C (59° - 86°F).

After reconstitution, store under refrigeration between 2° and 8°C (36° - 46°F).

Do not freeze. Keep lightly closed. Keep out of the reach of children.

Caution: Federal (U.S.A.) law prohibits dispensing without prescription.

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- ☛ Don't try to change eating and shopping habits overnight. Think of it as an ongoing process of good health for life. It's just not possible to learn everything about healthier life-styles at once, so don't set an impossible task for yourself.
- ☛ Try to plan shopping as carefully as possible. Sometimes, shopping has to be done in a hurry, but try to give some thought to it ahead of time in order to minimize or eliminate impulse purchases. Besides, even a few moments of planning saves a lot of time and aggravation at the store. Spend some time in advance thinking about healthy substitutions and additions to make.
- ☛ Don't shop on an empty stomach.
- ☛ You don't have to avoid treats or rewards. Just try to think of healthy foods as special treats.
- ☛ Explore the produce section. Be adventuresome and try a new kind of fruit or vegetable. Try them one at a time, so they won't seem as overwhelming. Think of new ways to try produce, and remember that it is usually low in fat and high in fiber.
- ☛ Look for fresh herbs to season foods, instead of fats, sauces, and gravies.
- ☛ A variety of foods is important to healthy eating and will also keep shopping from seeming so routine.
- ☛ Read labels carefully. Ingredients are listed in order of quantity. Choose products that have no fats or oils, or in which fats are listed last.
- ☛ Beware of so-called "healthy" or "lite" foods. Read the labels carefully for fat, fiber, and vitamin content. Remember that you don't need to buy any special foods to improve your diet.
- ☛ Avoid processed, salt-cured, smoked, and nitrate-cured meats and foods. Always buy fresh when you can.
- ☛ Select low-fat, non-fat, and skim milk dairy products.
- ☛ Buy tuna packed in water, not in oil.
- ☛ Brace yourself for a barrage of impulse items, such as candy bars, at the checkout. Prepare in advance to resist this assault by reading a magazine, balancing your checkbook, or engaging in conversation.
- ☛ Contact your local American Cancer Society for more tips.



Clinical Pearls in Pediatric Toxicology: A Systematic Approach to the Poisoned Child

Alson S. Inaba MD*

Toxic ingestions in children can present various clinical dilemmas. This brief article will focus on some of the key clinical pearls that will enhance the physician's ability to approach any poisoning case in a more systematic and organized fashion.

Epidemiology of Poisonings

Each year there are approximately two million poisoning cases that are reported to poison control centers throughout the United States. In 1996 there were 2,155,952 human exposure cases reported to American Association of Poison Control Centers (AAPCC).¹ This reflected a 6.6% increase in the number of cases reported as compared to 1995. The majority of all poisonings that occur throughout the country each year involve young children as victims. In fact, 52.8% (1,137,295) of the cases reported to the AAPCC in 1996 involved children less than six years of age.¹ Therefore, physicians and other health care providers who provide medical care for infants and children must possess a very solid clinical knowledge base in the assessment and management of pediatric poisonings. The peak age of pediatric poisoning cases involve children between the ages of 18 months to 3 years of age. In 1996, 47% of all poisonings reported to the AAPCC involved children 3 years of age and younger.¹

During the 1996-1997 fiscal year, the Hawaii Poison Center (HPC) received a total of 11,963 calls; 8,666 (72.4%) of these calls involved actual human exposure cases.² The epidemiology of poisonings here in Hawaii is not very different from that of the rest of the United States. Last year 45% (3,442) of the human exposure cases involved children 5 years of age and younger.²

Seventy-five percent of all poisonings both here in Hawaii and on the mainland involve ingestions as the primary mode of exposure.² The other routes of exposure include dermal contact, inhalations, ocular exposures and envenomations. Therefore, because oral expo-

sure is by far the most common route of poisoning, this article will focus primarily on the initial assessment, stabilization and management of toxic ingestions.

Initial Assessment and Stabilization of Poisoning Cases

The priorities in the initial assessment and stabilization of any poisoning case involves the standard "A-B-C's" of emergency medicine. Regardless of the substance that was ingested, the initial priorities in the management of any poisoned child involves the assessment and stabilization of the child's Airway, Breathing and Circulation. Along with the stabilization of these three key physiologic elements, one must also stabilize any Seizures that may be an associated symptom caused by the ingested toxin or medication. Once the child has been stabilized from the standpoint of airway, breathing, circulation and seizure control, then one can address the specific toxicologic issues involved in the individual case;

- a) History of the poisoning
- b) Toxicologic physical examination
- c) Laboratory studies
- d) Gastrointestinal decontamination options

History of the Poisoning

The three essential questions which must be addressed in all poisoning cases are WHAT, WHEN and HOW MUCH:

- a) What substance(s) was ingested?
- b) How much of each substance(s) was ingested?
- c) When did the ingestion take place?

The answers to these three questions will help you to address other clinical issues such as: a) the severity of the ingestion, b) the potential benefits of gastrointestinal decontamination, c) whether or not other therapeutic interventions will be necessary, d) interpretation of specific drug levels and e) disposition of the patient.

Perhaps the most difficult question for parents to answer regarding their child's ingestion is exactly how much their child may have ingested. Being able to estimate how much of a liquid a child drank or how many pills were ingested is extremely important in determining the potential severity of the ingestion. Determining the potential severity of a given ingestion will then determine how aggressive one should be in the further management of a poisoned child. However children who present with severe signs and symptoms will obviously require aggressive stabilization, decontamination and man-

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Table 1.—Dr Al's Weights based on Age Formula

1 year old	→ 10 kg
3 year old	→ 15 kg
5 year old	→ 20 kg
7 year old	→ 25 kg
9 year old	→ 30 kg
11 year old	→ 35 kg
13 year old	→ 45 kg
15 year old	→ 55 kg
17 year old	→ 65 kg

Table 2.—Key Elements of The Physical Exam

Eyes; Pupillary size, symmetry and response to light
Presence of any nystagmus (vertical and/or horizontal)
Oropharynx; Moist or dry mucus membranes
Presence or absence of gag reflex
Presence of any peculiar odors to the patient's breath
Abdomen; Presence or absence, and quality of bowel sounds
Neurologic; Level of consciousness and mental status
Presence of tremors, seizures or other movement disorders
Deep tendon reflexes (normal reflexes, hyperreflexia or hyporeflexia)
Skin; Warm and dry, warm and moist, or cool

agement. Children who present asymptomatic or with fairly mild symptoms may still also require an aggressive management approach if the amount (in terms of mg/kg) ingested is calculated to be a potentially toxic quantity. It is always safer to assume the worse clinical scenario in any given case rather than to make the mistake of guessing that a child probably didn't ingest very much of a given substance or medication.

For example, if a mother states that she just discovered her two children (ages 2 and 3-years-old) playing with an empty bottle of Tylenol children's chewable tablets, what specific questions should you ask to determine if a potentially toxic amount of the Tylenol was ingested? How do you estimate the potential toxicity for each child (especially when children rarely will give you an accurate account of exactly how many tablets each of them ingested)?

a) **WHAT?** Exactly which Tylenol product did these children ingest? Because there are several types of Tylenol tablets that are available for children, one must determine exactly which product the children ingested.

Answer: 80 mg grape-flavored Tylenol chewable tablets.

b) **HOW MUCH?** Determining exactly how many tablets were ingested in a case such as this can be some what tricky. Parents very rarely know exactly how many tablets were in the bottle when a child gets a hold of a medication. Therefore specific questions which should be asked in order to determine the worse possible case scenario include; When did the parents purchase the Tylenol? How many tablets were in the bottle at the time they purchased the Tylenol? How many tablets did they use since they purchased the product? How many remaining tablets did they find either in the bottle or around the children?

Answers: The bottle originally contained 30 tablets when the parents purchased the Tylenol 2 weeks ago. They remember using 2 tablets to treat a fever in their 2-year-old child approximately 2 weeks ago. There are no tablets remaining in the bottle and the parents did not find any tablets around the area in which they discovered the children playing with the Tylenol bottle. Therefore, if we assume the worse case scenario, there are 28 tablets (a total of 2,240 mg) that are unaccounted for in this case. Although an acute

ingestion of more than 6 grams is the potentially toxic amount in an adult, ingestions of more than 140 mg/kg are potentially toxic in children. Whenever there is more than one child involved in a possible ingestion case, the physician should assume that one child ingested the entire amount of tablets that are unaccounted for. Thus, one needs a method to estimate the weight of a child based on the child's age. A very simple and easy to remember formula that I have published which has become referred to as, "Dr Al's weights based on age formula," is as follows:³ (see Table 1)

According to this formula, start with a 1-year-old at 10 kg, then for every odd-numbered year simply increase the child's weight by 5 kg. After age 11 years, increase the weight by 10 kg for every odd numbered year (to take into account the growth spurt that occurs during the adolescent years). Therefore if we use 12 kg as the estimated weight for a 2-year-old and 15 kg as the estimated weight for a 3-year-old, the potential amount of Tylenol ingested by the 2-year-old child would be 187 mg/kg (assuming that this child ate all 28 of the Tylenol tablets). Similarly, the amount of Tylenol that the 3-year-old child may have ingested would be 149 mg/kg (assuming that the 3-year-old child ate all 28 of the Tylenol tablets). Therefore, based on these calculations both children may have ingested a potentially toxic amount of Tylenol and will therefore require further action.

c) **WHEN?** Knowing the exact time that the children may have ingested the Tylenol tablets will help the clinician decide whether or not too much time has already elapsed for any attempts at gastrointestinal decontamination to be effective. The time of the ingestion is also essential in knowing where to plot the measured serum Tylenol levels on the Rumack-Matthew nomogram. For example, is a serum acetaminophen level of 100 mcg/ml potentially hepatotoxic? Without knowing the exact time of the ingestion, this serum level in itself may be absolutely meaningless. If this level was obtained 4 hours post-ingestion, a 100 mcg/ml is not a potentially hepatotoxic amount. However, if this level was obtained 8 hours post-ingestion, then this exact same value of 100 mcg/ml would be a potentially toxic level which would require N-acetylcysteine therapy.

The Toxicologic Physical Examination

Toxic ingestions in children present as one of two possible scenarios. The first scenario is that of a child who presents with a history of a witnessed or suspected ingestion. The second scenario

Table 3.—Five Distinct Toxidromal Cases

1. Anticholinergics (ex; atropine, antihistamines, tricyclic antidepressants, etc...)
 - Tachycardia, hypertension, mydriasis, agitation, hallucinations/delirium, seizures, hypoactive bowel sounds, warm/dry skin and dry mouth
2. Sympathomimetics (ex; amphetamines, cocaine, theophylline, phenylpropanolamine, PCP, etc...)
 - Tachycardia, hypertension, mydriasis, agitation, hallucinations/delirium, seizures, hypoactive bowel sounds, warm/moist skin
3. Cholinergics (ex; organophosphates and carbamates)
 - "DUMBLES:"**
 - D = Defecation
 - U = Urinary incontinence
 - M = Miosis
 - B = Bronchospasm, bronchorrhea & bradycardia
 - L = Lacrimation
 - E = Emesis
 - S = Salivation
4. Opioids (ex; codeine, morphine, meperidine, heroin, etc...)
 - Bradycardia, hypotension, bradypnea, pinpoint pupils, euphoria, hyporeflexia and hypothermia
5. Sedative hypnotics (ex; ethanol, benzodiazepines, barbiturates, etc...)
 - Bradycardia, hypotension, bradypnea, ataxia, miosis and hypothermia

Table 4.—"MUDPILES"

- M = Methanol
- U = Uremia
- D = DKA
- P = Paraldehyde
- I = Iron, isoniazid & ibuprophen
- L = Lactic acidosis (ie; carbon monoxide, cyanide, and various other causes of lactic acidosis)
- E = Ethanol & ethylene glycol
- S = Salicylates

is that of a child who presents with a constellation of signs or symptoms which may include a possible toxic ingestion within the differential diagnosis. For example, a previously healthy 2-year-old child who presents to the emergency department after experiencing an afebrile seizure should have the possibility of a toxic ingestion included in his differential diagnosis, along with the possibility of head trauma and various other causes of seizures.

Every element of a patient's vital signs should be closely analyzed in all poisoning cases. When confronted with a poisoning victim, although many clinicians usually remember to look for any derangements in a patient's heart rate, respiratory rate and blood pressure, many physicians forget to consider whether the toxic ingestion may have affected the patient's body temperature. Closely analyzing a patient's vital signs may also give the clinician a clue of what the ingested substance might be in the case of an unknown ingestion.

Although a complete physical examination is necessary in all children who have ingested a toxic substance, there are some key elements of the physical examination which may provide valuable clues in the case of an unknown ingestion (See Table 2)

In cases when an unknown substance was ingested or if the possibility of a toxic ingestion is included in the differential diagnosis, strict attention to the presenting vital signs and the key elements of the toxicologic physical examination as listed above, may provide the clinician with valuable clues as to what class (or type) of medication may have been ingested. The term "toxidrome," refers to a specific constellation of signs and symptoms which may be suggestive of a specific class (or type) of toxic substance. There are five distinct toxidromal classes (See Table 3).

Laboratory Studies

The laboratory studies that are ordered will of course vary depending on the type and severity of the ingestion. Although toxicologic screens of blood and urine and specific drug levels may be obtained, the results of these studies will be of no value in the initial stabilization and management of each poisoning case. In

cases where a patient presents after an intentional overdose some of the standard recommended laboratory studies include: toxicologic screens, serum acetaminophen level, serum salicylate level, EKG rhythm strip and a pregnancy test.

In cases of an unknown or suspected poisoning, the anion gap may be useful in determining the possible toxicologic substance. The anion gap is determined by the formula:

$$\text{Na} - [\text{Cl} + \text{CO}_2]$$

The normal anion gap in pediatrics is equal to 8-12 mEq/Liter. If a patient exhibits metabolic acidosis, the anion gap may provide clues as to the etiology of the metabolic acidosis. The differential diagnosis of an increased anion gap metabolic acidosis can be remembered by the mnemonic of "MUDPILES" (See Table 4).

Another very useful laboratory value is the measured serum osmolality and the serum osmolar gap. The patient's serum osmolality can be calculated via the formula:

$$2 \times [\text{Na}] + [\text{BUN} / 2.8] + [\text{glucose} / 18]$$

Based on this calculated formula the only three elements in the serum which are taken into account in calculating the serum osmolality are the patient's serum sodium, BUN and glucose. In contrast to this calculated formula, when the laboratory actually measures the patient's serum osmolality, other substances in the patient's blood which could potentially elevate the serum osmolality are also taken into account. Substances that typically elevate the measured serum osmolality include the alcohols (ie; ethanol, ethylene glycol, isopropyl alcohol and methanol).

The serum osmolar gap (which is normally <5-10 mosm/Liter) is determined by the formula:

$$[\text{measured serum osmolality}] - [\text{calculated serum osmolality}]$$

The value of the serum osmolar gap can be used to predict a patient's blood ethanol level via the formula:

$$[\text{serum osmolar gap}] \times [4.6] = \text{ethanol level (mg/dL)}$$

Continued on Next Page

Gastrointestinal Decontamination Recommendations

Currently there are five gastrointestinal decontamination (GID) options available to clinicians:

- Syrup of ipecac
- Gastric lavage
- Activate charcoal
- Cathartics
- Whole bowel irrigation

Based on data from the AAPCC, there has been a decreasing trend in the use of syrup of ipecac. Nationally, ipecac was used in only 1.8% of all exposure cases in 1996, as compared to ten years ago when ipecac was utilized in 13.3% of the exposure cases.¹ Here in Hawaii (especially in and around the Honolulu area) poisoning victims are usually only within 30 minutes from the nearest emergency department. Therefore because of this unique proximity to emergency departments and more efficient, quicker methods of gastrointestinal decontamination, currently ipecac is very rarely used as a decontamination method. The only place where ipecac would have a clear cut benefit is for patients who live in remote areas who would have long transportation times to the nearest emergency department.

Gastric lavage has several major advantages over ipecac as an option for gastric evacuation. Lavage allows for a quicker and a more controlled method to remove toxins from a patient's stomach as compared to ipecac. Patients who undergo gastric lavage are less likely to vomit activated charcoal as compared to those patient's who may have protracted bouts of emesis after ipecac administration. Under the conventional method of performing lavage, the physician would perform lavage "until clear," and then activated charcoal would be administered down the lavage tube. A newer method of gastric lavage which can be utilized in more severe ingestion cases calls for a sequence of "charcoal-lavage-charcoal." The major rationale for this alternative method of lavage is that the first dose of plain activated charcoal is administered (5-10 minutes prior to starting the lavage procedure) to rapidly start adsorbing the toxins throughout the gastrointestinal tract (especially those toxins that are already distal to the stomach and therefore would not be able to be evacuated by the lavage procedure).

Gastric lavage's main limitation (especially in the pediatric patient) is that the internal diameter of the lavage tube must be large enough to accommodate pill fragments. A Tylenol gelcap will barely fit through a 32 French lavage tube. A whole tablet of either a regular strength Tylenol tablet or an Advil tablet will not fit through the narrow lumen of a 32 French tube. Another limitation of both gastric lavage and syrup of ipecac is that both of these methods of gastric decontamination will only remove toxins and substances from the stomach. Toxins that are distal to the stomach cannot be evacuated with either of these two methods of gastrointestinal decontamination.

Activated charcoal is extremely effective in adsorbing a wide variety of substances throughout the gastrointestinal tract. The majority of the charcoal preparations on the market today (ex; Actidose, Liquichar, etc...) have adsorptive surface areas of 1,000 square meters per gram of charcoal. Some of the newer "super" adsorptive preparations (ex; CharcoAid 2000) reportedly have up to 2,000 square meters of adsorptive surface area per gram of charcoal.

Table 5.—CHEMICaL Camp

C	=	Cyanide
H	=	Hydrocarbons
E	=	Ethanol & other alcohols
M	=	Metals
I	=	Iron
Ca	=	Caustics
L	=	Lithium
Cam	=	Camphor
P	=	Potassium

Because activated charcoal is able to prevent systemic toxicity by effectively binding so many different toxins, many poison control centers throughout the country, have recently been recommending administration of activated charcoal alone (without first performing gastric lavage) in ingestion cases of moderate severity.

Because activated charcoal is so effective in adsorbing such a wide variety of toxins it has often times been referred to as the "universal antidote." However there are several instances where activated charcoal will not be very effective in preventing systemic toxicity. The nine ingestion scenarios in which activated charcoal may not be useful can be remembered by my mnemonic of "CHEMICaL Camp."⁴

Activated charcoal is not very effective in adsorbing ethanol (and the other alcohols), metals, iron, caustics, lithium and potassium. Even though charcoal has a very low affinity for cyanide, it may still be effective in preventing systemic toxicity if the amount of cyanide ingested is within the 100-500 mg range. Although activated charcoal is not necessary for ingestions of plain hydrocarbons, it should be considered if the ingested hydrocarbon contains systemic toxins (ie; aromatic and halogenated compounds). Although activated charcoal is very effective at adsorbing camphor, charcoal administration may not be very effective by the time that the patient arrives in the emergency department. Because the majority of camphor-containing products are of a liquid preparation, the ingested camphor is typically very quickly and completely absorbed. Therefore by the time that the patient arrives in the emergency department there may not be any camphor remaining in the gastrointestinal tract to be adsorbed by the activated charcoal.

Multiple doses of activated charcoal (without cathartics) may be used as a method of "intestinal dialysis" for certain drugs that undergo enterohepatic circulation (ie; theophylline, carbamazepine, tricyclic antidepressants, phenobarbital and digoxin).

Cathartic agents by themselves are not a very effective means of gastrointestinal decontamination. The major role of cathartics is to more quickly eliminate the charcoal-bound toxins from the gastrointestinal tract before the toxins have the opportunity to dissociate from the activated charcoal. Sorbitol is probably the most utilized of the cathartics because of its rapid GI transit time and the convenient fact that it comes in combination with activated charcoal in pre-mixed amounts ranging from 27-48 grams per 120 cc bottle of charcoal. Sorbitol can be safely used in children as long as it is administered only once per 24 hours and stool output in very closely monitored.

Whole bowel irrigation (WBI) is a method of utilizing high

volumes of iso-osmotic fluids to eliminate toxins from the GI tract. The major advantages of WBI include its ability to eliminate toxins from the GI tract that are not effectively adsorbed by activated charcoal. Because of this advantage WBI has become the GI decontamination method of choice for significant iron and lithium overdoses. Unlike the limitations of ipecac and gastric lavage, WBI has the advantage of being able to eliminate toxins that are distal to the stomach. The two iso-osmotic solutions that are currently recommended for WBI are GoLytely and CoLytely. Adults and teenagers are given 1-2 liters/hour of either solution via a nasogastric tube until the rectal effluent is clear. The recommended rate for WBI in children is 25 cc/kg/hour (up to 500 cc/hour). Typically WBI requires approximately 4-6 hours to achieve a clear rectal effluent.

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The Hawaii Poison Center: What's It Worth to You?

John F. Racine PhD, RN* and Bruce S. Behnke, MHA**

Benefits of the Hawaii Poison Center (HPC) to the public, providers, and third party payers are enumerated. Financial advantages to third party payers during 1996-7 were quantified by comparing costs for the home management of poisonings with alternative sources of care reported by callers, if the HPC were closed. The value for third party payers exceeded \$2.5 million, greater than eight times the investment in operating the HPC, similar to national data. Since third party payers are the most visible beneficiary of cost savings, a case is made for their financial support of the HPC.

Introduction

The Hawaii Poison Center (HPC), like all of the Nation's poison control centers (PCCs), saves lives and money by providing 24-hour telephone hotline services, provider consultations, community education, professional education, and community surveillance.^{1, 2, 6} These activities offer health and/or economic benefits to the general public, health care providers, and especially to third party payers of health services.³⁻⁷ Figure 1 specifies HPC services and their advantages for each beneficiary.

After a cutback in State funds at the end of 1995, the HPC also shares with most PCCs the lack of a permanent source of financing for its operation. While everyone benefits from economic public goods, like this community service offered free of charge, no one individual entity bears the responsibility nor assumes its costs. If PCCs were closed, according to the literature, both private and public third party payers would experience a substantial financial impact.^{5,10} The purpose of this article, therefore, is to review what the HPC is worth to all of us, and to specifically calculate its cost savings for the major third party payers in the State.

Figure 1.—PCC Services and Benefits by Beneficiary

Beneficiary	Services	Benefits
Public	24-hour free telephone hotline for immediate assessment, triage, referrals, treatment, monitoring, information; prevention, community education, epidemiologic surveillance	Reduced poisoning morbidity, disability, and mortality; reduced poisoning incidence; reduced unnecessary medical spending, reduced time and transportation costs; reduced lost work days
Providers	24-hour free telephone hotline consultation for diagnostic, treatment, and referral advice; professional education, toxicology databases	Improved patient care; decreased burden on emergency medical system and emergency departments; reduced practice costs
Payers	Home management of non-toxic or low toxic human exposures through counseling, first aid advice, and follow-up; early diagnosis and treatment of serious exposures	Reduced unnecessary or inappropriate emergency department visits, physician office visits, hospital admissions, laboratory testing, ambulance transport; decreased length of hospital stays and fewer complications; reduced claims processing costs and claims payout

Literature Review

PCCs are said to decrease injury, illness, and death due to poisoning, as well as reduce the number of new poisonings.³ The focus in the literature, however, has been on their economic benefit in terms of health care cost savings. The reason for this emphasis, in addition to the technical difficulties of measuring poisoning outcomes, has been the critical financial condition of PCCs and the threat of their closure.² As a result, studies have provided evidence on the cost-effectiveness of PCCs, in terms of health care cost savings, to advocate for funding by continuing or new sources.⁸⁻¹¹

The most recent research, by Miller and Lestina, analyzed costs and benefits from a comprehensive, societal perspective.^{10,11} They estimated that lifetime losses from 1992 poisonings were about \$50 billion in the U.S., which includes \$3 billion in medical spending, \$12 billion in lost wages and housework, and \$35 billion in lost quality of life. Their research also demonstrated that every \$1 spent on a PCC saves almost \$6.50 in health care spending—comparable to the savings from immunizations.

Three earlier studies focused on the payer's perspective and

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contrasted differences in health services utilization and related health care expenses between PCCs and alternative sources of care.^{8, 9, 5} The economic impact documented in these studies is primarily derived from the ability of PCC staff to manage nearly 75 percent of poisoning cases entirely by telephone, substituting for the use of more costly resources, such as emergency department visits and ambulances.^{2, 3, 8, 10}

In King and Palmisano's study, the State of Louisiana was compared with Alabama, which had similar triage patterns before the closing of the Louisiana PCC.⁸ After closure, their results showed that Louisiana had less than half the rate of home management and four times the rate of self-referrals to more expensive health services than Alabama, costing more than three times the annual PCC Louisiana appropriation.

Mvros et al. surveyed PCC callers about their health insurance coverage and hospitals about their emergency department costs.⁵ They concluded that the State government and private payers are the financial beneficiaries of PCCs, which saved several times their operating costs.

Kearney et al. compared the operating costs of a regional PCC with hypothetical alternative sources of advice and care by surveying recent callers.⁹ After discovering that the majority of respondents would have sought assistance from emergency department or emergency medical systems, their results showed that direct public access to PCCs lowers health care costs by reducing the use of these emergency resources.

Methods

This descriptive study adopted the research strategy of Kearney et al. Costs were compared between home management of suspected and actual poisonings by HPC staff and hypothetical alternative sources of care reported by callers. Unlike the special data collection required for the Kearney et al. study, callers to the HPC are routinely asked about hypothetical alternative sources of care during a follow-up call to monitor their home management.

Direct health care cost savings were then estimated for each alternative source of care to determine the financial value of the HPC. Finally, total health care cost savings for each major third party payer that has beneficiaries who use HPC services, were calculated, similar to Mvros et al.

The study population included all incoming calls to the HPC about human exposures from July 1, 1996 to June 30, 1997. The major data sources on caller utilization, hypothetical alternative sources of care, and health insurance coverage are the 1996-7 annual report and the HPC database.

Results

Caller Analysis

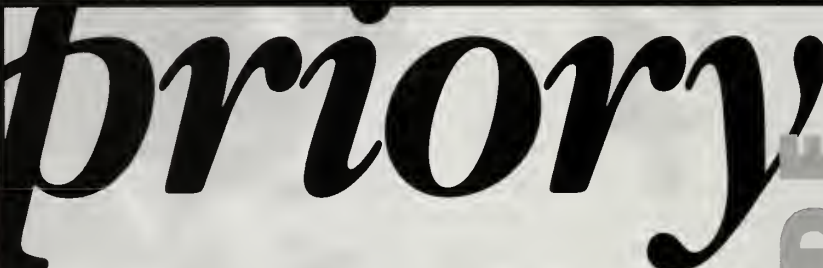
The HPC received 11,963 incoming calls during 1996-7, of which 8,666 were for human

Table 1.—Alternative Sources of Care to HPC by Frequency and Percentage


Alternative Sources of Care	Frequency	Percentage
Go to Emergency Room	476	7%
Call Emergency Room	2,081	32
Call 911	574	9
Call Physician	2,547	39
Call Another Advice Line	620	10
Watch and Wait at Home	202	3
Total	6,500	100%

exposures. (The HPC also receives calls about animal exposures and general information calls that are counted into the total call volume). The recorded number of incoming calls received by HPC is only an estimate of the actual number of poisoning events occurring annually throughout the State. The actual number of poisonings in the U.S. and in the State is unknown, but the literature does suggest that fatal cases, in particular, are underreported to PCCs.¹²


Seventy-five percent of calls to the HPC for human exposures (6,500) were managed over the telephone in the callers' own homes. These poisoning cases were either non-toxic or low toxic exposures.¹ The rate of home management for calls to the HPC was identical to the estimates reported about other PCCs in the litera-




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Table 2.—Frequency of Alternative Sources of Care and Their Costs

Alternative Sources of Care	Number	Costs
Emergency Room	3,790	\$2,274,000
Emergency Medical Service	402	180,900
Physician Visits	1,020	122,400
Total	5,212	\$2,577,300

ture.^{3, 5, 9}

Information was obtained from 5,079 (78%) of the callers who were managed at home about what they would have done if the HPC had been closed. Sixty one percent of these callers identified an alternative source of care. Their selections included 1) going to an emergency room (4%); 2) calling an emergency room (17%); 3) calling 911 (5%); 4) calling a physician (21%); 5) calling a pharmacist (9%); 6) and, calling another telephone advice line (5%). According to data not reported in the HPC's annual report, 37% (1,871) did not know what they would do and 2% (80) said they would have just waited and watched at home.

Estimates were calculated for the 1,421 callers from whom no actual data on alternative sources of care were collected, because there had not been any follow-up calls, and the 1,871 callers who didn't know what they would do if the HPC closed. It was assumed that each of these groups of callers would have selected the same alternatives as those reported above. It was also assumed that the 951

Table 3.—Percentage of HPC Callers by Major Payer Category (Ranked by Cost Savings)

Major Payer Ranked by Cost Savings	Percentage of Callers	Cost Savings
HMSA	27.0%	\$695,871
Department of Defense	18.0	463,914
Kaiser Permanente	16.0	412,368
Other Private Payers*	14.0	360,822
Uninsured Indigent (including Visitors)	13.0	335,049
Medicaid (Federal Share)	5.5	141,752
Quest (State)	5.5	141,751
Medicare	1.0	25,773
Total	100%	\$2,577,300

* Other private payers includes the following categories of insurance: Other insurance (5%); Queen's (2%); PGMA (2%); HMAA (1%); Straub (1%); HDS (1%); Kapiolani (1%); Island Care (>1%); Pacific Health Care (>1%); Travellers (>1%); Aetna (>1%)

callers who reported pharmacists as an alternative source of care would have been referred to a different source by pharmacists, because of liability concerns. As a result, this category was also eliminated and distributed according to the percentages of answers in the remaining classes of answers. The final adjusted figures are displayed in Table 1.

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Cost Savings Analysis

The 1996-7 financial report indicates that total expenses for the HPC were \$293,122. The HPC spends 90 percent of all dollars on direct services, compared with 70 percent by all PCCs, reported in a 1993 survey by the American Association of Poison Control Centers.³ Labor represents almost 90% of these direct costs, a more efficient use of expenditures by the HPC, than the Nation's PCCs as a whole.

The cost per home-managed case was estimated by dividing the total number of incoming calls into operating expenses for 1996-7, similar to the methods used by Miller & Lestina and Kearney et al.^{9,10} The cost per case at the HPC was \$24.50, similar to other published rates.^{3,9,10} The total cost for all human exposures managed at home by the HPC was \$159,250.

Table 2 examines the frequency of alternative sources of care if the HPC were closed and their costs. The table further consolidates the frequency data from Table 1 into emergency room visits, 911 calls, and physician office visits, alternative sources of care for which there would be charges. It was assumed that there would be no charge for using another advice line.

Because of liability concerns, all callers to emergency rooms would be requested to visit in person. Based on local facility experience, 80%

of all callers to emergency rooms, who are requested to come into the emergency room, actually show up. Also, 30% of 911 callers, based on the experience of the City and County of Honolulu, refuse treatment and transportation to emergency rooms. The conservative assumption is made here that personal transportation is not used and those cases do not result in an emergency room visit.

Based on HPC data, it is assumed that 11% of all cases managed by physicians are non-toxic exposures, for which there are no office visits. It is also assumed, from HPC data, that approximately 55% of all poisoning calls are after physician office hours and callers would be referred to the emergency room.

The costs of alternative services were based on actual local 1997 charge data for an emergency room visit, ambulance transportation, and a physician office visit. Emergency room visits ranged between \$500 and \$700 and a mean of \$600 was used in this analysis. The charge by the City and County of Honolulu for ambulance transportation is currently \$450 and an emergency room visit fee was added to transportation for the total cost of 911 calls. A fee of \$60 was used for physician office visits.

The total cost for the hypothetical alternative sources of care was \$2,577,300. Over 95% of these costs were for emergency room visits and emergency medical services utilization. According to the literature, PCCs save money by avoiding use of these services.³ For every dollar spent, the HPC returns over \$8 in cost savings to third party payers, at the higher end of the \$4 to \$9 range reported by national studies.³

Table 3 presents third party payers by the reported insurance of HPC callers and cost savings. Costs savings are greatest for the largest payers—HMSA, the Department of Defense, and Kaiser Permanente. The costs of care for the uninsured indigent, including visitors, if the HPC closed, would be borne by hospitals with emergency rooms.

Discussion and Conclusions

Third party payers, as shown here, avoid a significant amount of cost through the operation of a PCC, such as the HPC. Specifically, the HPC saves 8-9 times the amount of dollars invested in its operation, similar to national studies.^{2,9,10} Prompt telephone advice from a PCC and home management of non- or low toxic cases can often obviate the need for an emergency room, physician visit, or an ambulance run, all of which result in expense to third party payers.

Even when additional care is advised through the PCC telephone consultation, third party payers are reasonably assured that the care recommended will be at the most appropriate, and consequently, most cost-effective level. Immediate referral to the most appropriate entry point to the health care system should also result in advantages to the patient that mutually benefit third party payers in the form of

fewer hospital admissions, shortened hospital stays, and fewer complications. Because PCCs do not bill third party payers for their services, the payers are once again the fiscal beneficiaries, avoiding claims processing and record-keeping costs.

The HPC potentially serves all the people in the State of Hawaii, regardless of their role in the health care system. A regional poison center has been justified on the basis of the importance of expertise about indigenous marine, animal, and plant species, knowledge of local emergency resources, and the ability to interact with a multicultural population. These features enable the general public and their health care providers to have ready access to resources that are responsive to local needs. The HPC also educates the public to prevent poisonings and collects data to identify patterns of poisonings that require public health interventions. These activities and their obvious benefits have not been converted into monetary value, but are as compelling as the financial ones focused on here.

More enlightened third party payers have supported PCCs financially in the form of community service grants or outright operations funding, but it is puzzling that given the significant savings derived from a PCC, all third party payers have not rushed to their aid. That third party payers have stood by while some PCCs have closed due to lack of funding, leaving parts of the country underserved or unserved, makes no sense even considered on purely economic terms. Since losing State funding in 1995, the HPC has been working on developing private funding sources, which comprised about 23% of its revenues during 1996-7. It is hoped that awareness of the multiple benefits shared by the public, providers, and third party payers will encourage ownership, especially by direct fiscal beneficiaries, to ensure that this valuable asset remains available to all in our community.

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The Selected Information Sources on Poisoning and Toxicology

Christine Sato, RRA, MLIS*

The third leading cause of unintentional injury death in 1993 was poisoning by solids and liquids, just behind motor vehicle accidents and falls.¹ Poisoning and toxicology impacts all health care professionals. Physicians and emergency medicine professionals manage acute care, health educators address prevention and public education, and researchers focus on advancements.

This article is an introduction to selected basic through advanced print and electronic information sources for anyone interested in poisoning and toxicology. All sources are available through the Hawaii Medical Library.

Print Sources

Books

The following titles are listed in the "Selected List of Books and Journals for the Small Medical Library,"² commonly referred to as the Brandon-Hill List. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has designated this list as an authoritative resource³ for establishing a core library collection. For toxicology, there are five titles:

Ellenhorn, Matthew J., ed. *Ellenhorn's Medical Toxicology: Diagnosis and Treatment of Human Poisoning*. 2nd ed. Baltimore, Williams & Wilkins, c1997.

The focus is principles of poison management, drugs, home, chemicals, and natural toxins. Information is presented in a readable, easy to find format.

Goldfrank, Lewis R. [and others]. *Goldfrank's Toxicologic Emergencies*. 5th ed. Norwalk, Conn.: Appleton & Lange, c1994.

The emphasis is managing emergencies: ingestion, preventing absorption, enhancing elimination.

Klaassen, Curtis D., ed. *Casarett and Doull's Toxicology: the Basic Science of Poisons*. 5th ed. New York: McGraw-Hill, Health Professions Division, c1996.

This edition contains additional chapters on: toxicokinetics, mechanisms of toxicity, toxic responses of the endocrine system, and recommended limits for exposure to chemicals.

Lu, Frank C. *Basic Toxicology: Fundamentals, Target Organs, and Risk Assessment*. 3rd ed. Washington, D.C.: Taylor & Francis, c1996.

This is an introductory text in the fundamentals of toxicology.

Olson, Kent R. [and others], eds. *Poisoning & Drug Overdose*. 2nd ed. Norwalk, Conn.: Appleton & Lange, c1994.

Presented in an outline format, practical, ready-reference information is given for diagnosis, management, and treatment.

Journals

Annual Review of Pharmacology and Toxicology

The focus is on research advances.

Environmental Health Perspectives : EHP.

This is a journal of the National Institute of Health, National Institute of Environmental Health Sciences (NIH/NIEHS).

Journal of Toxicology. Clinical Toxicology.

This is the official publication of the American Academy of Clinical Toxicology and European Association of Poisons Centres and Clinical Toxicologists.

NeuroToxicology

The focus is on the effects of toxic substances on the nervous system.

Electronic Sources

Databases

Two comprehensive databases on toxicology are MICROMEDEX® Healthcare Series and TOXLINE. The *Hawaii Medical Library* subscribes to the MICROMEDEX® Healthcare Series and offers this on its CD-ROM network. TOXLINE is available through a mediated literature search by the Reference Staff.

MICROMEDEX® Healthcare Series provides current and in-depth information on toxicology, pharmacology, emergency care, patient education, and environmental health and safety. MICROMEDEX® Healthcare Series databases useful for medical and emergency

*Consumer Health Librarian
Consumer Health Information Services
Hawaii Medical Library
1221 Punchbowl Street
Honolulu, HI 96813

management of toxicologic conditions are:

POISINDEX® System: Commercial, pharmaceutical, and biological substance management.

TOMES® System: Industrial, environmental, and chemical substance management/

IDENTIDEX® System: Tablet and capsule identification

TOXICITY NOMOGRAMS AND CALCULATORS

MSDS from the United States Pharmacopeial Convention (USPC)

REPRORISK® System: Reproductive risk information system

DRUG-REAX® System: Interactive drug reactions

DRUGDEX® System: Drug evaluation monographs and adverse reactions

EMERGINDEX® System: Disease and trauma information

On a practice level, the Hawaii Poison Center operates a 24-hour telephone hotline and has immediate access to their MICROMEDEX® Healthcare Series databases. The Hawaii Poison Center cites the POISINDEX® System as their most frequently used database in the MICROMEDEX® Healthcare Series.⁴ Detailed information is provided on clinical effects, laboratory/monitoring, treatment, range of toxicity, kinetics, pharmacology/toxicology, animal toxicology, references, and author information.

TOXLINE (Toxicology Information Online), maintained by the National Library of Medicine, is a bibliographic database covering published material and research on toxicology. International in its scope, subject areas include pharmaceutical, biochemical, physiological, and toxicological effects of drugs and chemicals. Almost all citations include abstracts. TOXLINE may also be accessed through subscription Grateful Med.

Internet

The following Web-sites provide a wide selection of poisoning/toxicology information for the health professional. Many of these sites are United States government sponsored projects, have an affiliation with the American Association of Poison Control Centers, or an affiliation with a university. All sites are in the United States.

General information sites for the health care professional and public:

Agency for Toxic Substances and Disease Registry (ATSDR)

<http://atsdr1.atsdr.cdc.gov:8080/>

This site links to Public Health Statements, the HazDat database, and ToxFAQs.

Maryland Poison Center

<http://www.pharmacy.ab.umd.edu/~mpc/index.html>

This is a good site for poison information and prevention resource materials.

The National Lead Information Center (NLIC)

<http://www.nsc.org/ehc/lead.htm>

The NLIC, managed by the National Safety Council, provides information on environmental lead poisoning and prevention.

National Pesticide Telecommunications Network

<http://ace.orst.edu/info/nptn/>

This site is a cooperative effort of Oregon State University and the US Environmental Protection Agency.

UC Davis Poison Center Answer Book

http://wellness.ucdavis.edu/wellness/safety_info/poison_prevention/poison_book/index.html

This site is maintained by the University of California, Davis, Medical Center Regional Poison Control Center.

Technical sites for the health care / toxicology specialist:

Material Safety Data Sheets (MSDS)

<http://www.chem.uky.edu/resources/msds.html>

Maintained by the University of Kentucky, Department of Chemistry, this site provides links to organizations providing MSDS information.

Medical Management Guidelines for Acute Chemical Exposures

<http://aepo-xdv-www.epo.cdc.gov/wonder/prevguid/p0000016/p0000016.htm>

ATSDR provides guidelines on the management of acute chemical exposure. These fact sheets also contain patient information handouts.

National Toxicology Program (NTP)

<http://ntp-server.niehs.nih.gov/>

This program reports on activities of the National Institute of Environmental Health Sciences (NIH/NIEHS), the National Institute for Occupational Safety and Health (CDC/NIOSH), and the National Center for Toxicological Research (FDA/NCTR).

Toxicology and Environmental Health Information Program

(TEHIP) <http://sis.nlm.nih.gov/tehip1.htm>

Maintained by the National Library of Medicine (NLM), this site provides links to NLM databases. Especially useful is Toxicology Tutor, a college level tutorial on the principles of toxicology.

For information about other resources at The Hawaii Medical Library, call the Reference Staff or visit our Web site (<http://hml.org>).

¹ National Safety Council. *Accident Facts*. 1996 ed. Itasca, IL: National Safety Council; 1996:15.

² Brandon AN, Hill DR. Selected list of books and journals for the small medical library. *Bull Med Libr Assoc* 1997; 85(2):111-135.

³ Joint Commission on Accreditation of Healthcare Organizations. *Comprehensive Accreditation Manual for Hospitals: the Official Handbook*. IL: Joint Commission on Accreditation of Healthcare Organizations, 1996: IM38.

⁴ Hawaii Poison Center. *Annual Report for July 1995-June 1996*. Hawaii, 1996:3.

Council Highlights

Friday, December 12, 1997
Roger Kimura MD, Secretary

The meeting was called to order by Dr Leonard Howard, President at 5:45 p.m.

Those present were Drs J. Spangler, Immediate Past President; R. Kimura, Secretary; C. Kelley, Treasurer; T. Au, J. Betwee, G. Caputy, J. Chang, W. Chang, C. Goto, G. Goto, C. Kam, R. Kienitz, P. Kim, B. Leeloy, C. Lehman, P. Lum, J. Lumeng, T. Magoun, J. McDonnell, G. McKenna, W. McKenzie, E. Montell, S. Saiki, M. Shirasu, M. Sia, R. Stodd, S. Wallach, W. Young.

HMA Staff: J. Won, N. Jones, H. Singh, J. Asato, P. Kawamoto and A. Rogness-recording secretary.

- **HMSA Physician Agreement:** Dr Howard introduced representatives from the consortium (Drs. Arlene Jouxson-Meyers, Malcolm Ing and Mrs. Susan Wong) who have been meeting regarding the HMSA Physician Agreement. The consortium put together a list of points that they would like to see changed in the proposed contract. Dr Howard reported that meetings with HMSA and the consortium would continue and that the HMA Economics/MCO Committee would be given the responsibility to review various contracts on behalf of physicians with input from the AMA and legal resources.

Secretary's Report: Dr Kimura reported an increase of 66 active full pay members, an increase of 22 members from November 1997.

Treasurer's Report: Financial statements for August - November 1997 were distributed and reviewed.

- Dr Howard reported: 1) that the Executive Committee (HMA Officers) are meeting every Wednesday afternoon at 1 p.m.; 2) Council will meet every other month at 5:30 p.m. and on the alternate months the Executive Committee will meet with the Component Society Presidents. 3) The committees have been consolidated/decreased to a total of 17 committees. 4) that he and Mr. Won will be visiting the neighbor island county societies at least twice this year; 5) A bulletin board will be maintained and an action officer appointed in order to keep track of motions that were made at the Council. 6) that he and Heidi attended the Coordinated Care Task Force Workshop. 7) HMA is also represented on the Tort Reform Task Force. A final draft of legislation will be available in a month. The focus of the group will be the elimination of the law on joint and several liability.

- The HMA Alliance presented a written report which was distributed to the Council members and will be kept on file.

Component Society Reports

Honolulu.—Dr C. Goto reported that the HCMS annual meeting in November was well attended and the speaker was Richard Miller, attorney for the Hawaii Coalition who had interesting comments on Physician Insurance Contracts. The HCMS will be holding general membership meetings every other month.

Maui.—Dr Betwee reported that he is having a difficult time getting physicians together to have a meeting. Prior to setting up a meeting, he would like to get a small group of member and nonmember physicians to meet and discuss membership goals.

Kauai.—Dr Magoun reported that he is planning a membership drive. A large medical group on Kauai will pay HMA dues if a physician

wants to join. He thanked Becky Kendro for arranging the Evaluation Management meeting on December 4.

West Hawaii.—Dr Leeloy reported that a meeting is planned for January 13 and Dr Bernard Fong will be the speaker.

Council Action

- A motion was passed to appoint a **Staff Action Coordinator** who would be responsible to track and follow-up on actions taken by HMA's governing bodies.

- Approved the Nominating Committees policy recommendations for elections by mail in 1998. Information will be sent to the membership in the newsletter.

- Approved the Finance Committee's recommendation for a mandatory \$50 fee for entities outside of the HMA using the Conference Rooms with a \$25 cleaning deposit.

- Approved a Finance Committee's recommendation to include a surcharge on dues paid in increments which exceeded the dues deadlines.

- Approved a membership survey to get feedback on what they like or dislike about the HMA.

- A motion was passed that Council members sign a disclosure statement indicating all their organizational affiliations which may cause conflict of interest.

For Information

AMA Interim Meeting Report.—Dr Kunimoto distributed a written report summarizing the AMA interim meeting. He announced that the AMA Executive Vice-President resigned prior to the meeting and Dr Len Jennings will serve as the acting EVP. The AMA Board of Trustees will conduct a formal search to fill the position.

Long Range Planning Committee.—The committee met on November 12 in response to Resolution No. 3 of the HMA 1997 House of Delegates. Drs G. McKenna and P. Hellreich were elected Co-chairs of the committee. The Co-chairs are going to meet before the next committee meeting to work on 5 to 6 key goals to present to the committee and Council.

Medicare Carrier Advisory Committee.—Some physicians who sit on the Medicare Advisory committee discussed concerns about cuts in reimbursements and the operations of the new Medicare carrier. Dr Howard asked that concerns about this issue be put in writing for submission to the next advisory committee meeting.

Board of Medical Examiners.—Dr J. McDonnell reported that the Board of Medical Examiners continues to meet after a two-year lull regarding nurse prescriptive authority. Dr McDonnell suggested an exclusionary formulary and the Board agreed to 4 of the 5 exclusions recommended — all narcotics, anesthetics, all experimental drugs and off labeled uses. The nurses would not accept the 5th exclusion recommended which would have permitted an agreement with two consenting parties that could exclude any drug.. The Board meets again in January to discuss the issue.

Meeting was adjourned at 7:35 p.m.

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Life in These Parts

The 25th Honolulu Marathon

(The Story of Two Doctors with Egos)

Cardiologist **Jack Scaff**, 62, doesn't run anymore, but he walks the marathon. Out of the 300,000 people who have run in the last 24 Honolulu Marathons, Jack is one of only eight to participate in all of them. A bad right leg and a spinal condition reduce him to walking the 26 plus miles. (Jack originated the Honolulu Marathon).

Jim Barahal, 45, hasn't entered a race since 1986, but he is president and CEO of the Honolulu Marathon and responsible for the popularity of the event. Back in 1987, Jim had a blunt and simple approach: "In order to survive, it has to thrive." Under his guidance, the Honolulu Marathon hooked up with the 4th largest advertising agency in Japan and also started to recruit elite runners esp from Kenya. It grew from a local run of 10,000 participants to its present 30,000 participants. An estimated 93.5 million dollars will be spent and it is the biggest marathon in the world. The race generates more money each year than any other single event according to the state Department of Business, Economic Development and Tourism.

All of this happened because Jack was at a Boston meeting of the American Medical Joggers Association which wanted to hold a meeting in Honolulu around a marathon. Jack got the then Mayor Frank Fasi and the Mid Pac Road Runners Club involved and launched the first Honolulu Marathon on December 16, 1973. The rest is history...

Music Medicine

(Excerpts from *Mid Week*, Jan. 28)

"A CD a day keeps the doctor away." **Don Purcell**, internist, psychiatrist, and pain management specialist says, "Music creates an environment where healing is more likely to occur."

Honolulu Symphony conductor and physician **Samuel Wong** is promoting the idea of music as medium in local hospitals. In January, Sam presented a piano recital and talk "Music is the Medicine of the Mind" for physicians and staff at Queen's Medical Center.

PhD **Arthur Harvey**, adjunct professor of music at UH-Manoa is a foremost authority on music therapy. He feels that "music can enhance every aspect of our lives. Music is nourishment for our bodies, as surely as food. It should be part of our daily diet." Harvey and Wong are working to set up a music program for the terminally ill at Hospice Hawaii.

Medical Tid Bits

(Condensed form "Dr Fitness" by **Chet Nierenberg**)

Q: What's the best treatment for Achilles Tendinitis?

A: Unfortunately there is no great treatment. As soon as you get heel pain, get it treated by

a physician. After you've had the problem for several months or a year, the problem becomes extremely difficult, if not impossible. The doctor will try long term anti-inflammatory medication; possibly heel lifts or ice after playing. In extreme cases, surgery can be considered, but not always successful. A definite thing not to do is cortisone injections.

Physician Moves

November:

ENT man **Ronald Peroff** relocated to Queen's POBI, Ste 910. OB-Gyn physicians **Cheryl Lynn Tanguilig**, **Leticia Diniega** and **Cheryl Leialoha** opened their new practice at Kapiolani Medical Center, Ste 520; (A Waipahu office will be opened in February).

January:

FP **Thomas T.C. Van** (from Arkansas Pass, Texas) joined the Straub Manoa Family Health Center.

Gastroenterologists **Glenn Pang** and **Stephen Buto** relocated to the new St. Francis Out-Patient bldg., 2226 Liliha St., Ste 405.

Internist **Mona Suzuki** opened her office at Newtown Square, 98-1247 Kahumanu St., Ste. 322.

Hors De Combat

HMSA 2-Year Contract

(Gleaned from a Dec. 18 News Article)

Hawaii's 1800 participating HMSA physicians reached a satisfactory 2-year contract late December 17 night.

Arlene Meyers, Wahiawa pediatrician and Hawaii Coalition for Health spokesperson said, "Some of the remaining provisions have great potential to adversely affect healthcare delivery. They chiefly revolve around who makes the final decision about what medical services are covered—the insurer or the doctor."

HMSA spokesman **Fred Fortin** maintains the new contract supports "physicians/patient control of medical care decisions."

HMA president **Len Howard** says, "The 2 years will be spent building trust between physicians and HMSA over continuing issues." The physician groups will submit lists of recommended doctors they would like to see on advisory committees to make the final medical care decisions.

Medical Data Private? No!

HMSA told a state judge earlier this year that HMSA employees have a legal right to look through confidential medical records of any past or present subscriber for any reason with or without specific authorization. HMSA maintains that it's members waived their right to privacy when signing up for coverage. Circuit Judge **Kevin Chang** agreed and in September ordered Honolulu physician **Elsie Blossom Wang** to turn over the requested records.

HMSA was fishing through medical records in

this case because of an unverified allegation of possible billing fraud.

Wang went to court last year to block the HMSA request for 15 medical files, when HMSA refused to produce authorizations signed by the patients. Wang maintained, "I don't think copies of medical records should be given lightly to anyone and certainly not without the patient's consent."

HMSA argued in court that Wang's objections were frivolous.

The AMA and the Massachusetts Medical Society (which publishes the *New England Journal of Medicine*) say patients have a fundamental right to privacy that should be honored unless they consent to disclosure.

Joseph Heyman, former MMS president says, "Privacy issues directly affect medical care. Because of privacy concerns, patients don't tell us things that we need to know to treat them or we don't record the information to protect them from disclosure. It's a terrible, terrible problem and something needs to be done about it."

Miscellany

(From *Reader's Digest Jan. '98 issue*)

Waiter to customers: "I'm sorry, but your managed care organization required me to substitute the fish for prime rib."

(*Funny Times*)

Overheard: "It's so cold this winter that I saw a lawyer with his hands in his own pockets."

(*Late Night with Conan O'Brien*) NBC)

Definition of a true music lover: "A man who, if he hears a woman singing in a shower, puts his ear to the keyhole."

(*General Features*)

Proverbs

- The "Lawyer's Creed": A man is innocent until proven broke.
- Why do we sing "Take me out to the ball game" when we are already there.
- Why do "tug" boats push their barges?
- If you can't drink and drive, why do bars have parking lots?
- Remember: If you think you can - or you think you can't, you're right.
- When they ship Styrofoam, what do they pack it in?
- If love is blind, why is lingerie so popular?
- When the draft of your boat exceeds the depth of the water, you are definitely aground.
- There are 40 kinds of lunacy, but one kind of common sense.

(Contributed by old MIS buddy, **Hakobu Kumagai**)

Conference Notes

Calcium Channel Blockers for Treatment of Cardiovascular Disease

QMC, Friday a.m., February 6, 1998. V.P. **John Schroeder** from Stanford Medical School

Angina = myocardial oxygen demand is greater

than myocardial oxygen supply. Phenomenon of **paradoxical vasoconstriction** to stimuli of arteriosclerotic arteries.

Spectrum of Ischemia

- Increased demand and further reduction of blood flow results
- from paradoxical vasoconstriction

Beta Blockers have adverse effect (respond to acetyl choline in patients with chronic stable angina) whereas Calcium Channel Blockers reverse this phenomenon of paradoxical vasoconstriction, i.e. **BB makes worse and CCB improves**

- EDRF (Nitrous oxide): inhibits platelet adhesiveness and promotes vasodilation

Abnormalities in endothelial function are related to hypertension

- It is a myth that BB reduces mortality in CAD, angina & HTN

My view point:

- I object to diuretics and BB in treating HTN
- We focus too much on the BP cuff
- HTN is a syndrome: High BP; lipid abnormalities; high insulin levels etc.
- Insulin per se causes vascular damage. BB causes further insulin resistance.
- HTN is a triad: i.e. **hypertension, insulin resistance and hyperlipidemia**

Quality of Life (Schroeder's List)

(Important in patient drug compliance)

- Gustation
- Defecation
- Cerebration
- Ambulation
- Fornication

Treatment of HTN: ACE and CCB

ACE I:

- antihypertensive
- normalize endothelial factor

CCB:

- Normalize endothelial factor
- Prevent accelerated coronary disease in transplanted hearts (Diltiazem [Cardizem] & freedom from atherosclerosis in transplanted hearts)
- Amlodipine for older hypertensives

Systemic Hypertension (170/70) in Elderly Program: Target 140 - 150 mg systole

PRAISE Trail: CCB use in CHF: no adverse effect.

reCalcium Channel Blockers (CCB): "Never let the truth get in the way of a good story."

Approach to Hypertension Therapy: (Schroeder approach)

- Start with one a day CCB or ACE
- Add 12.5 mg HCTZ
- Add alpha Blocker if BPH
- Continue with higher dose of CCB or ACE

****Avoid BB for quality of life issues etc, etc..**

****Avoid sublingual Nifedipine and tid Nifedipine**

Variant Angina: Use once a day CCB

Angina: Once a day CCB viz Long-acting diltiazem/verapamil or Amlodipine/Felodipine

Post MI:

- ACE or BB for Q wave MI
- Diltiazem for non Q MI
- CCB for angina/HBP

CHF (congestive heart failure):

- ACE or A2 (Angiotensin II Blocker)
- Amlodipine/Felodipine only
- If Angina/HBP: continue BB/alpha blocker

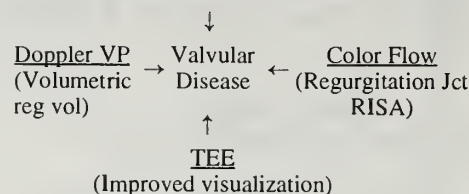
Evaluation of Cardiac Valves in Patients who Use Fen-Phen

VP Jae Oh, Associate Professor of Medicine, Mayo Clinic, QMC, Friday a.m., Jan. 30, 1998.

Evaluation of CV Disease

- History
- Exam
- ECG
- CRX
- ECHO

2D/M Mode (Mostly ventricular function)



re Fen-Phen: "As the patient gets thinner, the valves get thicker"

William Edwards (cardiac pathologist)

Summary Cardiac Study:

n = 4,532 Random selection; healthy adults; Ages 23 - 35

2D & Doppler Electrography Results:

Aortic Regurgitation: 1.2% (normal incidence)
Mitral Regurgitation: 1.0% (normal incidence)

****Relative Risk of Valvulopathy with Fen-Phen & Dexafen c Phen: 5 to 12%**

****Prevalence Data:** 28.7 to 38.7% prevalence

****Prevalence Data:** Time dependent

16% - 3 mos (of use)
22% - 3 to 6 mos
34% - 6 mos

****Reported Cases:** 108 patients c defects

95% women

Median age: 44

Incidence a/c drug:

2% c Fen only, 13% c Dexafen only, 81% c Fen-Phen
4% c Fen, Phen, Dexafen

Conclusions:

- Fen & Dexafen cause valvulopathy
- Six million Americans took the drugs
- The largest drug-induced adverse risk

Recommendations of the American College of Cardiology (Oct. 18, 1997):

- Stop taking the drugs
- Get a cardiovascular exam
- Echo cardiography if: Murmurs or symptoms present
- Screening ECHO not recommended
- Repeat cardiovascular exam in 6 to 8 mos

Recommendation of DHHS:

Do ECHO on patients who had taken the drugs

Is Insulin a Cardiovascular Risk Factor?

QMC, Friday a.m. Lecture Jan. 9, 1998. VP Robert Ratner from George Washington.

Insulin & Atherosclerosis

- Glycation/oxidation lipids;
- Smooth muscle proliferation/migration;
- Increases growth factors (cytokines);
- Prothrombic (PAI-1; wF1 fibrinogen, Lp[a]);
- Enhances androgen hormone effects

Hyperinsulin States:

NIDDM; IDDM; Syndrome X

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Abdominal Obesity

NIDDM

Insulin Resistance

Caution:
Hazard Waist

Hyperinsulinemia

Hypertension **Disproproteinemia** **Hyperfibrinolysis** **Smooth**
(↑ triglycerides, (High PAI-1) **Muscle**
↓ HDL) **Proliferation**
(Growth Factors)

Atherosclerosis

Prevalence of Hyperinsulinemia. Is proinsulin atherogenic?

Conclusions:

- High prevalence of CAD risk and obesity rather than premature CAD may be a/c hyperinsulinemia
- Insulin is a necessary, but not causal factor for hyperinsulinemia
- Hyperinsulinemia and hyperproinsulinemia are common in men and women non-diabetics with premature CAD
- Hyperinsulinemia may be marker for other metabolic and homeostatic abnormalities.

Risk Factor (determining marker) **Risk Marker** (Surrogate for risk factor)
↓
Disease

Risk Factors (Smoking Dyslipidemia) **Risk Markers** Hypertension Hyperglycemia Male sex FH of CAD
↓
CAD

* Of the traditional CAD Risk Factors in whites & blacks, hypertension is the only significant risk factor

Classified Notices

To place a classified notice:

HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in HMJ as space is available.

Nonmembers.—Please call 536-7702 for a nonmember form. Rates are \$1.50 a word with a minimum of 20 words

Office Space

Pearl City Business Plaza.—Tenant Improvement Allowances for Long Leases; 680+ sq ft; 24-hr security; free tenant/customer pkg; Gifford Chang 581-8853 DP, 593-9776, 531-3526.

Ala Moana Bldg.—5th Flr, Doctor's office. 630 sq ft ready to move in. Adjacent 348 sq ft also available. \$1.65 base rent. X-ray and Lab on same floor. John Ohama at Honolulu Land Company, Ltd. 522-1717.

Locum Tenens

Board Certified family practitioner.—Available for short term practice coverage. Liability insurance provided. Please contact: V. Braslavsky, MD (913) 383-3285. <http://www.concentric.net/~locumdr/1.htm>.

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Practice to Share

Practice to Share.—Full time internist needs time for other activities. Share practice, share call/weekends. Ideal for someone raising a family or wanting to build a practice. No buy-in required. Serious inquiries only. Call HMA at 536-7702 x 2234.

Announcement

New Practice.—Dr Raymond D. Thompson announces the opening of his General Practice at the Ala Moana Bldg, 1441 Kapiolani Blvd., #1405, Honolulu, HI 96814-4407. Phone 943-0101.

New Location.—Dr M. Pierre Pang, Pacific Eye Surgery Center, Inc., St. Francis Out Patient Bldg., 2226 Liliha St., #305, Honolulu, HI 96817, Phone 533-7400, Fax: 521-7798.

For Sale

For Sale.—1998 ICD-9CM. Easy Coder books. Special price of \$45. (shipping included). Limited Supply. Call Queen's Physician Group office at 532-6181.

**There's no Excuse
for
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Misc.

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Deception, misrepresentation, evasion, obfuscation, duplicity, outright lies—a White House Richard Nixon would be proud of.

After almost five years and many thousands of dollars in attorneys' fees, the wheels of justice at last rolled over the Clinton administration for sins of the failed health reform task force, headed by first lady Hillary Rodham Clinton and her aide, Ira Magaziner. A federal judge ordered the government to pay sanctions of \$285,864 because of White House and Justice Department's "dishonest and reprehensible" conduct in failing to reveal key information to the court. In blasting the Administration, Judge Royce C. Lamberth said, "It is clear that the decisions here were made at the highest levels of government..." Additionally, the Judge stated he is convinced that Ira Magaziner deliberately misled him with a sworn statement that the task force was comprised of government employees only. It has been revealed that the task force included special interest groups and many others not on the federal payroll. Is anyone surprised?

No longer drink just water, but use a little wine for the sake of your stomach and your frequent ailments. Timothy I, 5:23

For some time it has been known that taking a glass or two of wine each day provides a beneficial stimulus to the human heart and mind. Now a report in the *Journal of the American Geriatrics Society* found that moderate wine drinking was associated with lower rates of age-related macular degeneration (AMD) also. Beer and liquor did not show a significant effect on the condition. As is known, AMD impairs the eyesight in about 1.7 million Americans over age 65, with loss of the ability to read or operate a motor vehicle. The design of the study does not actually prove that wine consumption lowers the risk of AMD, and there is not specific definition as to how wine would reduce the risk of the disorder. Still, the study of these data from 3,072 participants contributes additional motivation for moderate imbibition.

There is no well defined boundary between honesty and dishonesty.

A 37-year-old aide to George Bush drank wine with dinner on a Saturday night. Over the next four days he took ten extra strength Tylenol tablets. He went into hepatic coma. He ultimately survived, but only after a liver transplant. He sued Johnson & Johnson and won eight million dollars. What is not known by many, and not adequately disclosed by J & J, is that acetaminophen can be very toxic to the liver and has a narrow range between therapy and toxicity. Children, drinkers and the undernourished are at risk at much lower doses. Acetaminophen is an old compound, but J & J has done a masterful job of marketing it with a budget estimated at \$250 million, more than Coca Cola spends on Coke. Tylenol holds an overwhelming share of the product market, so the campaign pays off. The dark side is that over 100 lawsuits have been filed against J & J over Tylenol poisonings, most of these in the last three years. J & J has paid out millions of dollars in legal settlements, but you don't hear about them, because many of the settlements require plaintiffs to not reveal the terms. Acetaminophen accounts for more drug deaths each year than cocaine, prescription narcotics, or benzodiazepines, and twice as many as aspirin. Meanwhile the Food and Drug Administration is muddling around over saccharin and silicone, neither of which have been proved to hurt anybody, but has yet to recommend that J & J provide suitable warnings of toxicity of Tylenol.

When a man is doing something he is ashamed of, he will claim it's his duty.

The American Association of Retired People (AARP) which purports to represent more than 30 million people is pulling back from its plan to endorse HMOs for older Americans. The presumptuous, pretentious pedants in charge of AARP (who elected them?) have denied that the change was due to any criticism. Rather, AARP is "trying to figure how it can best help its members navigate managed care in light of recent changes." Oh really? Then please kindly explain the failure to mention that AARP was requiring HMOs to pay a royalty of \$20 a month to the AARP for each member they enrolled under the program? Any wonder that AARP members and HMOs were indignant? If the

AARP were truly representative of older citizens, leaders would advise their members to seek a thoughtful, intelligent family doctor, and steer clear of the disinterested, insensitive corporate practice of medicine typified by the "health maintenance organization."

To whom you tell your secrets, to him you resign your liberty.

A survey of 1020 adults was designed to determine who people trust to keep their medical information confidential. Physicians topped the list with 78% trusting their doctor, while confidence in insurers was only 39% and employers 46%. The federal government was at the bottom with only 29% trusting the feds. Now the Clinton administration is proposing to broaden law enforcement's access to private medical records and allow researchers to obtain such information without the patient's consent. Most respondents to the survey would have no quarrel with the creation of a national repository of medical information, but wanted the data to be anonymous and more than 70% said the repository should be controlled by physicians.

Why are doctors and nurses accountable for their health care decisions, but managed care companies are not?

A woman was in trouble with her pregnancy, and her doctor recommended hospitalization. Her employer-sponsored health plan denied hospitalization and instead authorized a visiting nurse. While the nurse was off duty, the fetus went into distress and died. A federal court ruled that the injured party could not sue the HMO for damages because of the federal ERISA (Employee Retirement Income Security Act). Under this law a damaged party can only sue for the cost of the benefit denied, and cannot claim lost wages, pain and suffering or punitive damages. But those creative people, the trial attorneys, were lobbying hard at a recent National Conference of State Legislatures. Now, some members of Congress are already pushing for a federal law to crack down on managed care. Some pointed remarks were, "Health plans are making decisions but not being held accountable in court." "Health plans claim to save money through utilization review, but when something goes wrong, say, 'It has nothing to do with us.' You can't have it both ways." Employers and managed care plans are terrified by these and similar questions which are forcing legislatures to act on behalf of injured patients.

According to life's pleasures, food is second only to sex—except for salami and eggs, they're even better than sex.

The Framingham study evaluated the association of stroke with intake of fat and type of fat among middle-aged males during 20 years of follow up, and who would have guessed? We are told by a recent *JAMA* article that intakes of fat, saturated fat and monounsaturated fat (all that really bad fat) were associated with a reduced risk of ischemic stroke in men! Take it easy, but go greasy!

To go where no man has gone before.

Apollo 16 space mission was enroute, but the astronauts did not realize the microphone was open when the following dialogue between John Young and Charles Duke took place:

Young: I got the farts again. I got 'em again, Charlie. I don't know what the hell give 'em to me. I think it's the acid in the stomach, I really do.

Duke: It probably is.

Young: I mean, I haven't eaten this much citrus fruit in 20 years. But I'll tell you one thing—in another 12 f_____ days, I ain't ever eating any more. And if they offer to serve me potassium with my breakfast, I'm going to throw up. I like an occasional orange, I really do. But I'll be damned if I'm going to be buried in oranges.

Addenda—

- ❖ There are 550 hairs in the average eyebrow.
- ❖ 15% of U.S. women admit they send flowers to themselves on Valentine's Day.
- ❖ I'm having daydreams about night things in the middle of the afternoon.

Aloha and Keep the faith.—rts ■

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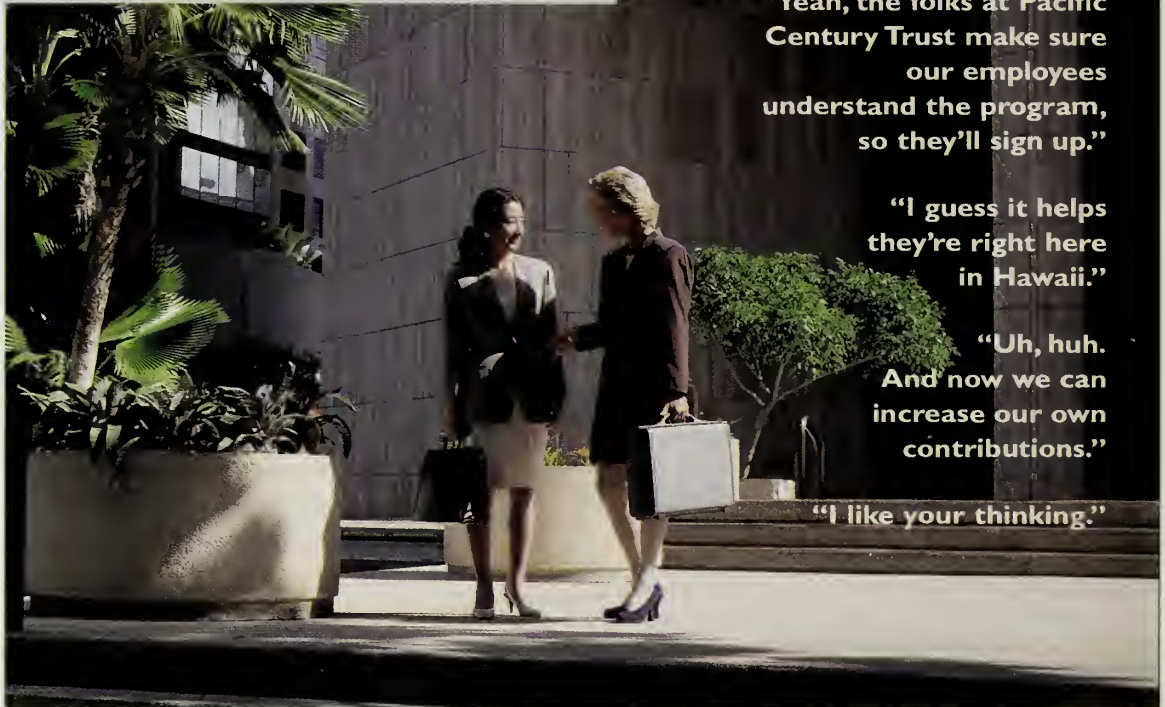
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HAWAII MEDICAL JOURNAL

April 1998 Volume 57, No. 4 ISSN: 0017-8594



Special Issue on Clinical Toxicology
and the Hawaii Poison Center - Part II

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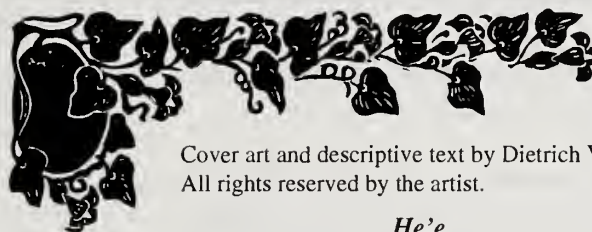
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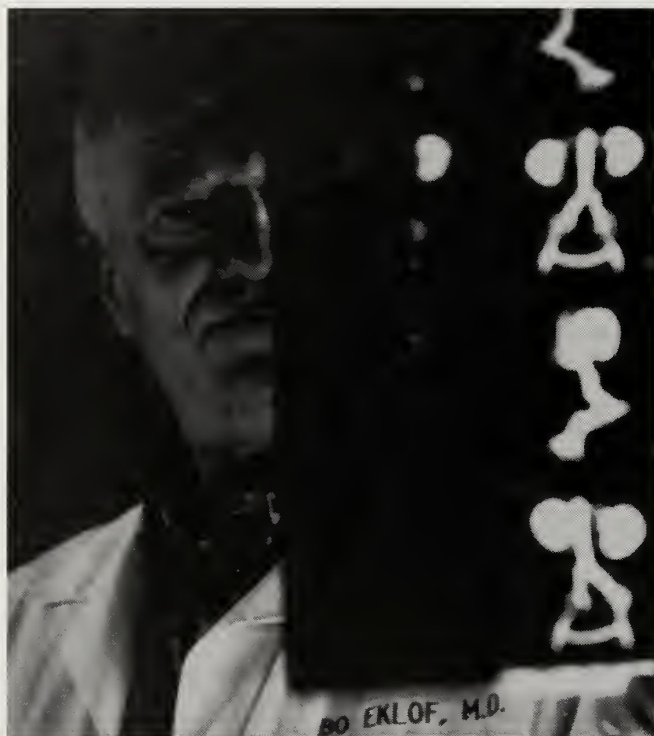
He'e

Although fishing was mainly for men in old Hawaii, women could fish for octopus at tidepool gatherings.

A Call to Physician Authors

We are always looking for interesting scientific articles and we would like to hear from more of you. The *Hawaii Medical Journal* is a peer reviewed publication and covers a wide variety of topics. To submit a manuscript please call us for manuscript guidelines. Fax or call for your requests to: Hawaii Medical Journal, 1360 S. Beretania Street, Second Floor, Honolulu, Hawaii 96814, Phone (808) 536-7702 or Fax us at (808) 528-2376, e-mail: hma-assn@aloha.net.

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– Friday Noon Conference –

**Environment of Care Trends for the 90's:
Abbreviated Study of Issues Which
Impact the Environment of Care for Patients
and Employees**

*Kevin Matsukado, Rose Arpon,
Clayton Takara & Michelle Fisher*

April 10, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants will be able to:

- Describe specific environment of care issues that may impact daily practice.
- Understand and identify infection control, tuberculosis and bloodborne pathogens.
- Summarize radiation safety, hazard communications, fire safety, chemical spills, body mechanics and general safety.

– Friday Noon Conference –
Luncheon

**Pain Management 101:
Examples From Clinical Practice**

Don Purcell, MD

April 17, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants will be able to:

- Understand how to manage acute, chronic and cancer pain.
- Manage pain medications effectively as well as the proper use of adjuncts.
- Understand the role of integrative medical care when treating the patient in pain.

– Friday Noon Conference –

**Alphabet Case: Adult Respiratory Distress
Syndrome (ARDS) in Systemic Immune
Response Syndrome (SIRS) with Multi Organ
Dysfunction of Sepsis (MODS).**

Elaine Imoto, MD

April 24, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants will be able to:

- Understand the role of Systemic Immune Response Syndrome (SIRS).
- Manage Multi Organ Dysfunction of Sepsis (MODS).
- Evaluate the success or failure of therapy.

Please call Fran Smith at 522-4471 for more information.



Editorials

April Special Issue

Norman Goldstein MD
Editor

Guest Editors John Racine and Alson Inaba did such a comprehensive job in amassing manuscripts for last month's Special Issue on Clinical Toxicology that we continue Part II with this issue of the Journal. I'll be bringing these two issues together at Kinko's and making it available in my office.

Thanks again to Debbie Ahina, manager of the Poison Control Center, for coordinating the papers for these Journals. Well done!

The Governor's Blue-Ribbon Panel on Living and Dying with Dignity

For more than a year, the Governor's Blue-Ribbon Panel, headed by Hideto Kono, has been conducting monthly meetings. The Panel was charged by Governor Cayetano to make recommendations to him about the increasing problems of living and dying with dignity. The Panel has taken into consideration the medical, legal, financial, ethical and spiritual dynamics related to the dying process.

During this period of listening to and gathering testimony from professionals and the public, we have concluded that too many people face unnecessarily a lingering, painful and undignified death. The Panel has offered several unanimous recommendations:

- That spiritual counseling be made available to individuals who are afflicted with life-threatening illnesses by integrating those services more fully into the health care system.
- That the public and healthcare professional education programs be designed and implemented to increase awareness of the choices available to the dying.
- That the content of Advance Directives for Healthcare, including the Living Will, be made more specific, their provisions more binding, and their use more widespread.
- That Hospice care be made more widely available, and offered more expediently to the dying.
- That effective pain management and additional symptom control be required in all licensed healthcare institutions.
- That involuntary euthanasia continue to be a punishable crime.

The recommendations about DADD (Doctor Assisted Death with Dignity) are still being reviewed by the Panel. We live in a pluralistic society, with many cultural and religious perspective. While we must be careful not to impose our beliefs and mores on others, I feel very strongly that our patients deserve the right to choose their own end-of-life decisions.

I recently returned from a meeting of Hemlock USA Board of Directors in San Diego. Hemlock USA and Hemlock Hawaii support most of the Panel's recommendations, and eagerly await the report to our Governor.

While several bills in support of DADD have been submitted to our legislators, unfortunately this will not be the year to get any of

these passed! It is very important that we continue our efforts to make our legislators aware of the problems of living and dying with dignity. A referendum should be very helpful, but this is also unlikely this year.

Leonard Howard MD, President of the Hawaii Medical Association, recently asked our members to complete a questionnaire on the subject of DADD. The survey is still being tabulated. Letters to the Editor will also be very helpful - pro or con. Let us hear from you.



President's Message

Leonard Howard MD

As I spend more time talking to physicians in the trenches, I am struck with two thoughts that are quite related. The first is the importance of getting information out to our members about hot topics and relevant items. Part of advocacy and representation is dissemination of information. We are attempting to do this by means of the newsletter, infofaxes to the county presidents and special mailings of high priority items direct to members.

Unfortunately, what I am also hearing is that our members are still not getting the information. Either they are not reading the newsletters or they are not attending the county meetings so the critical information can be passed on. I talked to one physician about the PGMA suit. He was not sure if he had responded to our information about the group suit or not. Others said they knew nothing about the action. This is despite two separate mailings about the problem and our proposed solution.

I would like to make this perfectly clear. We cannot accomplish actions on your behalf unless you are willing to do your part in responding to the mailings. We attempted to survey the members about their opinion on legislation allowing physician assisted suicide, and received less than fifty replies from the fifteen hundred sent out. This indicates to me a lack of interest in the issue, and we will allow the legislative committee to determine our position on the bill.

You have heard this before, but I am going to repeat it because I want our trial with vote-by-mail to be valid. **The process requires that 25% of the votes be returned in order to make a quorum.** Don't set the envelope aside for a later time. That time will never come and the envelope will get buried on your desk. Forgive me for preaching, but the election of next year's officers is one of the most important tasks we have to do. Take your vote seriously. Respond to requests for information. That is the only way we can truly represent you. In Unity there is Strength!

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Medical School Hotline

Fundraising for Medical Education

Patricia Lanoie Blanchette M.D., MPH

Professor of Medicine

John A. Burns School of Medicine

President, JABSOM Alumni Association

Wanda Jane Pavela Kaspari truly valued higher education. Born in La Crosse, Wisconsin, Wanda Jane Pavela moved to Chicago after her high school graduation. She married, John Ignatius Kaspari, a consulting electrical engineer whose job involved extensive travel. Together, John and Jane traveled the globe, and finally retired in Hawaii.

Shortly after their arrival in Hawaii, Jane read an article citing the need for bodies in medical education. She immediately willed her body to the University of Hawaii's John A. Burns School of Medicine. Upon the death of her husband in 1990, Jane finalized her own estate plan.

Jane passed away at the age of 87. In her estate plan, she did remember family and friends. However, the rest, residue, and remainder of her estate was left to support the training and education of medical doctors for Hawaii. Beginning this year and every year thereafter, the Wanda Jane Pavela Endowment will assist as many as four of Hawaii's future physicians each year to complete their studies at the John A. Burns School of Medicine.

Recently, the John A. Burns School of Medicine launched a major effort towards excellence. To that end, the School is seeking funds to endow priorities and special programs through major gifts. Funds given to name chairs, programs, or departments are one of the most significant ways to honor beloved family members or former teachers. By attaching their names to perpetual and significant excellence in teaching and research, it keeps their spirit alive among our students, faculty and friends.

Major giving is surprisingly within the reach of many. Insurance policies, charitable remainder trusts, and annuities often serve to provide the donor with tax savings and turn assets into income while providing the family with protection of their inheritance. All of this may be achieved while providing a meaningful gift to the School. But the heart of giving is not in the possible tax advantage, but in the spirit of giving and of giving back. Many physicians in Hawaii could not have gone to medical school if it were

not for our school. Countless people are helped every day by our alumni, our residents, and our students. Nothing makes medical care so meaningful as having a student looking over one's shoulder while one is doing one's best for a patient.

The medical school has always been dependent upon the generosity of spirit of Hawaii's physicians. The School's recent self-study in preparation for its re-accreditation underscored this point in one important way. Although there are only about 2,000 physicians

Continued on Page 473

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Toxicologic Teasers: Testing Your Knowledge of Clinical Toxicology

Alson S. Inaba MD*

The following questions and cases are intended to challenge the physician's knowledge of clinical toxicology. Some of the multiple-choice type of questions listed below may have more than one correct answer.

1. Tachycardia, hypertension, mydriasis, agitation and warm/dry skin are suggestive of which toxidrome?
 - a) Anticholinergics
 - b) Sympathomimetics
 - c) Cholinergics
 - d) Sedative-hypnotics
 - e) Opioids
2. Acetaminophen ingestions are probably one of the more common accidental ingestions in children.
 - a) Based on the history of the ingestion, at what amount (mg/kg) would you be concerned about the possibility of hepatotoxicity?
 - b) What serum acetaminophen level would be considered potentially hepatotoxic at 4 hours postingestion?
 - c) If N-acetylcysteine (Mucomyst) is required to prevent hepatotoxicity, what is the loading dose (mg/kg) of Mucomyst?
3. List at least 5 poisonings which classically produce an increased anion gap metabolic acidosis.
4. Which of the following medications is/are capable of producing bradycardia after an acute overdose?
 - a) Carbamates
 - b) Digoxin
 - c) Organophosphates
 - d) Phenylpropanolamine
 - e) Clonidine
 - f) Phenylephrine
5. For each of the following poisonings, list the appropriate antidote:
 - a) Acetaminophen
 - b) Salicylates
 - c) Organophosphates
 - d) Cyanide
 - e) Carbon monoxide
 - f) Methemoglobinemia
 - g) Benzodiazepines
 - h) Morphine
 - i) Isoniazid
 - j) Ethylene glycol
 - k) Iron
 - l) Methanol
 - m) Phenothiazine (dystonic reactions)
 - n) Antihistamines (with very severe anticholinergic symptoms)
6. A 3-year-old child accidentally drank some mouthwash that contained ethanol. He presents in an intoxicated state to the emergency department. Based on the laboratory values listed below, what would you predict this child's blood ethanol level (mg/dL) to be? (Hint; use 4.6 as the conversion factor for ethanol).

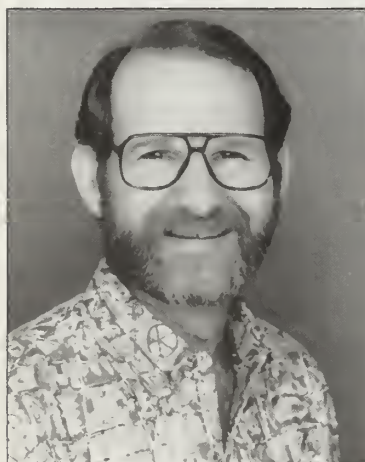
Na = 139 K = 3.5 Cl = 103 CO₂ = 14 BUN = 13 Creatinine = 0.7 Glucose = 115 Measured serum osmolality = 310
7. List which toxidrome you would expect for each of the acute ingestions listed below.
 - a) An over-the-counter cough medication containing diphenhydramine
 - b) Cocaine
 - c) An insecticide containing carbamates
 - d) A mouthwash containing ethanol
 - e) A decongestant containing phenylpropanolamine
 - f) An analgesic containing codeine
8. A previously healthy 4-year-old child presents with an acute onset of bronchospasm, muscle weakness, vomiting, bradycardia, urinary incontinence, salivation and confusion. What toxidromal class is most likely responsible for these signs and symptoms?
 - a) Anticholinergics
 - b) Sympathomimetics
 - c) Opioids

*Medical Director of the Hawaii Poison Center
Pediatric Emergency Medicine Fellowship Director and
Emergency Department Attending Physician
at the Kapiolani Medical Center for Women and Children
Associate Professor of Pediatrics at the University of Hawaii
John A. Burns School of Medicine

- d) Cholinergics
e) Sedative-hypnotics
9. Which of the following drug overdoses is/are capable of producing hyperthermia?
a) Benadryl
b) Methanol
c) Cocaine
d) Amphetamines
e) Phenobarbital
10. Which of the following agents is/are capable of producing hypotension (and describe the pharmacologic mechanism by which that agent produces hypotension)?
a) Verapamil
b) Propanolol
c) Metamphetamine
d) Ferrous sulfate
e) Tricyclic antidepressants
- than 140 mcg/ml.
- c) If N-acetylcysteine is required to prevent hepatotoxicity, the loading dose of Mucomyst is 140 mg/kg.
3. Conditions which classically cause an increased anion gap metabolic acidosis can be remembered by the mnemonic of "M-U-D-P-I-L-E-S:"
M = Methanol
U = Uremia
D = DKA
P = Paraldehyde
I = Iron, INH, ibuprofen
L = Lactic acidosis (ie; carbon monoxide, cyanide)
E = Ethanol and ethylene glycol
S = Salicylates
4. ALL of the medications listed are capable of producing bradycardia. Carbamates and organophosphates both produce cholinergic signs and symptoms (which include bradycardia). Digoxin can produce bradycardia by slowing conduction through the AV node. Phenylpropanolamine and phenylephrine are alpha-agonists that are commonly used as decongestants. In an acute overdose situation, both of these alpha-agonists produce hypertension which is accompanied by a reflex (protective) bradycardia. Clonidine-induced bradycardia is due to a generalized sympathetic depression (which also produces hypotension, bradypnea and a depressed mental status).
5. a) Acetaminophen; N-acetylcysteine (Mucomyst)
b) Salicylates; urinary alkalization
c) Organophosphates; atropine +/- pralidoxime (2-PAM; reactivates the cholinesterase enzyme)
d) Cyanide; Lilly brand cyanide antidote kit (which contains the following three items; amyl nitrate, sodium nitrite & sodium thiosulfate)
e) Carbon monoxide; oxygen (via non-rebreather mask, endotracheal tube or hyperbaric chamber)
f) Methemoglobinemia; methylene blue
g) Benzodiazepines; flumazenil (Romazicon)
h) Morphine; naloxone (Narcan)
i) Isoniazid; pyridoxine (vitamin B6)
j) Ethylene glycol; ethanol drip (although there have been recent reports of using a newer agent [4-methylpyrazole; Fomepizole] to inhibit the alcohol dehydrogenase enzyme)
k) Iron; desferoxamine (Desferal)
l) Methanol; ethanol drip (although there have been recent reports of using a newer agent [4-methylpyrazole; Fomepizole] to inhibit the alcohol dehydrogenase enzyme)
m) Phenothiazine (dystonic reactions); diphenhydramine (Benadryl)
n) Antihistamines (with very severe anticholinergic symptoms); physostigmine (a reversible inhibitor of the acetylcholinesterase enzyme, which should be used with extreme caution since this antidote may actually precipitate a cholinergic toxidrome)

Answers to "Toxicologic Teasers"

1. Although tachycardia, hypertension, mydriasis, agitation and warm skin may be seen with both the anticholinergic and sympathomimetic toxidromes, the finding of dry, warm skin is suggestive of the anticholinergic toxidrome. An example of an anticholinergic ingestion which is not all that uncommon in pediatrics is a diphenhydramine (ie; Benadryl) overdose. In medical school many of us were taught that anticholinergics produce the state of being "mad as a hatter, red as a beet, blind as a bat and dry as a bone." Sympathomimetics (ie; cocaine, theophylline) usually cause sweating and therefore these patients tend to present with warm, moist skin rather than dry skin.
2. The answers to the three questions regarding acetaminophen poisoning can be remembered by "Dr. Al's 140-140-140 rule" of 140 mg/kg... 140 mcg/ml... 140 mg/kg.
a) Based on the history of the ingestion, there is a risk of hepatotoxicity if the ingested amount of acetaminophen was greater than 140 mg/kg.
b) There is a risk of potential hepatotoxicity if the serum acetaminophen level at 4 hours post-ingestion is greater



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6. First of all we need to calculate this child's predicted/calculated serum osmolality, which is determined by using the formula:

$$[2 \times \text{Na}] + [\text{BUN} / 2.8] + [\text{Glucose} / 18]$$

Therefore based on the laboratory values provided in this case, the child's calculated serum osmolality would be:

$$[2 \times 139] + [13 / 2.8] + [115 / 18] = 289 \text{ mosm/L}$$

Notice that this formula for determining the calculated serum osmolality does not take into account any other substances that could contribute to the patient's serum osmolality other than sodium, BUN and glucose. Normally the calculated serum osmolality and the actual measured serum osmolality are fairly close if there are no other substances in the patient's blood that could increase the patient's measured serum osmolality. The serum osmolar gap can be determined by the formula:

$$[\text{measured osmolality}] - [\text{calculated osmolality}]$$

The osmolar gap is normally < 5-10 mosm/L. Because of the ethanol that is present in this child's blood the actual serum osmolality that was measured by the laboratory was 310 mosm/L. Based on this formula, this child's osmolar gap would therefore be:

$$[310] - [289] = 21 \text{ mosm/L}$$

And finally, the formula that can be used to estimate this child blood ethanol level based on the osmolar gap is:

$$[4.6] \times [\text{osmolar gap}] = [4.6] \times [21] = 96.6 \text{ mg/dL}$$

Remember that a blood ethanol level > 80 mg/dL is considered legally drunk in the State of Hawaii.

7. a) Anticholinergic
b) Sympathomimetic
c) Cholinergic
d) Sedative-hypnotic
e) Sympathomimetic
f) Opioid
8. D (cholinergics). The cholinergic toxidrome can be remembered by the mnemonic "D-U-M-B-L-E-S;"
D = defecation
U = urinary incontinence
M = miosis
B = bronchospasm, bronchorrhea and bradycardia
L = lacrimation
E = emesis
S = salivation
9. A, C and D. Both anticholinergics (ie; Benadryl) and sympathomimetics (ie; cocaine and amphetamines) are capable of producing hyperthermia. Methanol and phenobarbital produce hypothermia rather than hyperthermia.

Medical School Hotline

Continued from Page 470

licensed in Hawaii, over 1,400 are clinical (non-compensated) faculty and teach medical students, residents, or fellows. Since its founding in 1967, the School has been community-based, integrated into community hospitals and clinics. Today, more than one-third of Hawaii's physicians are alumni. They have made a difference in the quality of medical care in Hawaii.

Despite the current tough economic times and a series of budget cuts that have affected the University, the School of Medicine continues on its mission in keeping the doors open to students from Hawaii and improving the delivery of health care in the State. The faculty also help the State's economy and intellectual climate by generating research and training grants whereby each dollar of the State funds allocated to the School generates three in outside funding. Despite its small size, the School has achieved national and international recognition in its Problem Based Curriculum.

The need to preserve the School's core in these tough times makes it challenging to explore new areas for significant growth or emphasis. That is where friends, old and new, can help. If there is something you think the school should be doing, join and help us. If there is something of importance to you or to your patients, tell us. These suggestions may provide potential possibilities upon which to continue building a world class medical school.

Wanda Jane Kaspari was not a fabulously wealthy woman. Over the years, she and her beloved John accumulated enough assets to enjoy a comfortable retirement. However, Jane Kaspari was a thinker and a planner. She carefully considered how to use her resources to make a permanent difference in her community. Her gift to assist students at the John A. Burns School of Medicine is really an investment in excellent medical care for the people of Hawaii.

10. A, B, D and E are all capable of producing hypotension. Both propranolol and tricyclic antidepressants are capable of producing hypotension by depressing myocardial contractility via their quinidine-like effects. Verapamil can produce hypotension via two pharmacologic mechanisms. One method is via its vasodilatory effect, and the other is via its negative inotropic effect on myocardial contractility. Ferrous sulfate can produce hypotension via multiple mechanisms which include;
- Hemorrhagic shock (secondary to the direct corrosive effect of iron on the GI tract mucosa that produces GI bleeding),
 - Distributive shock (due to vasodilatation and capillary leak) and
 - Cardiogenic shock (due to iron's direct negative cardiac inotropic effect on myocardial contractility).

Clinical Techniques in Crisis Intervention: Emergency Counseling in Cases of Acute Poisoning

Leigh W. Jerome PhD and Janusz Smolenski MD

Introduction

When faced with an emergency situation, people often panic. Poisoning is an emergency situation where quick response time is critical and remaining calm is essential. Panic can present an enormous challenge for those who are providing acute care in poisoning cases. This article will present an overview of clinical techniques which, when employed, can minimize chaos and increase safety and cooperation in emergency situations.

Case Presentation

David and Cynthia called their physician in a state of panic. The parents were extremely agitated, explaining that their son, Michael, had gotten into some drain cleaner that was kept under the sink. After watching him for a few minutes to see what developed, David and Cynthia tried to make Michael vomit. The child became increasingly ill. By the time the family contacted their doctor, the child had lost consciousness.

David was loud and belligerent. He screamed abusively at the nurse who had answered his call, ignoring her questions for information about what the child had ingested and insisting that he speak with their doctor at once. Cynthia picked up the other extension but could not be understood because she was crying hysterically and repeating over and over that Michael was going to die. The nurse tried to explain to the parents that they should have called the poison control center or 911 immediately rather than attempting to make the child vomit. Michael's parents became defensive and angry in response to these instructions and the situation became increasingly chaotic and out of control.

Case Assessment

In any emergency situation, a moderate degree of panic can be expected. In most cases, this will subside once assistance is offered, especially when the assistance is provided with a competent and confident demeanor.¹ However, in some cases, panic does not diminish. In the presented case, David and Cynthia are in a heightened state of arousal and panic. This emotional reaction threatens the safety of their son and the individuals who are attempting to assist in this medical emergency.

Panic must be dealt with immediately. Panic behavior can be exasperating and arouse anger, annoyance and defensiveness in others; however, left unattended panic always represents a threat to safety and the productive resolution of an emergency situation. In the case provided, care to the poisoning victim, Michael, would

have been greatly facilitated by administering immediate clinical intervention to his parents, David and Cynthia.

Techniques for Dealing with Emergency Situations

In emergency situations, victims and bystanders experience increased secretions of adrenaline into their systems. This secretion acts as a powerful stimulant causing increased breathing, increased heart and metabolic rates, the constriction of blood vessels and stronger muscle contractions.² This 'fight or flight' reaction significantly contributes to the experience of panic. There are specific strategies which can be employed to appropriately intervene.

- **Be calm.** Panic is contagious and it can spill over into the reactions of others, even trained professionals. Deliberate self-control may be required to keep one's voice firm but calm and gentle. This is important to do. When someone is out of control, they need to know that someone else is in control and that they are on the same side.
- **Select a single, simple message.** During emergencies and heightened panic, an individual may not be able to easily receive messages. Do not overwhelm the panicked person with information. When face to face, establish clear eye contact. Repeat a single, simple message several times until it is clear that the person has received it. For example, "David, you need to be calm so we can help your boy." or "Cynthia, you can help most by being calm."
- **Find out the person's name and use it.** It is helpful to establish some degree of rapport during an emergency. The first thing to do is to ask the person what their name is and then introduce yourself. When repeating the initial message, use the person's name. This intimacy can help to calm a person down and will enhance their feelings of support.
- **Provide reassurance.** People will respond favorably to reassurance during emergency situations. Reassurance can be enhanced through sustained eye contact, a calm tone of voice, reassuring statements and touch. For example, briefly reassuring the mother, may have enabled her to become significantly calmer so that she could take the next step that was necessary. A statement such as

"Everything is going to be okay" would be appropriate. This kind of human contact may break through a hysterical reaction and allow the person to regain a little self-control.

- **Phrase statements positively.** There are two ways that messages can be given. When someone is hysterical, it might be tempting to tell them "You can't keep crying like this." Or "Stop it." This won't help. Phrasing statements in a positive manner will make them more easily received. Negative statements are more likely to sound authoritative and punitive. This is not helpful in volatile situations.
- **Educate earlier or later but not during an emergency.** An emergency situation is not the time to bring up what may have been done to prevent an accident or what might have been a more helpful response. Even when David becomes defensive and threatening, the crisis time is not the appropriate moment to challenge his statements. Keep the focus on the present emergency.
- **Be patient.** Most people will become significantly calmer shortly after a careful intervention; however, sometimes it takes a little longer. Do not become impatient. Impatience will aggravate the situation.
- **Don't ignore panic.** It is better to take the time to deal with panic right away than to wait or ignore it and hope it goes away by itself. Left unchecked, panic can escalate and a bad situation may get much worse.

Prevention

Education decreases the number of poisoning cases and increases the likelihood of a favorable response when poisoning does occur. Parents should be encouraged to obtain medications in small quantities and to store them in bottles with safety closures. Any toxic substances, including cleaners, should be stored in places not accessible to children (either a locked or remote location - but beware of children's ingenuity).

Some cases of accidental poisoning may in fact be experimentation by children looking for a "high." Other poisoning cases, especially cases of repetitive self-poisoning, may reflect substantial conflicts in the family or a suicide attempt.³ If there is any suspicion of psychopathology, appropriate referrals should be made

for the child and his/her parents.

Regardless of education, poisoning emergencies will still happen. It is therefore critical to teach people how to deal appropriately with emergencies involving acute poisoning. Education is the most effective measure for decreasing the seriousness of the injury and increasing chances of survival. The most reliable tool for effective functioning is to teach the "5-C's" for responding to emergency poisoning situations. This can be easily mastered and recalled. Proficiency can be achieved by envisioning oneself in a critical situation and going through the 5-C steps. A simplified version of the 5-C's is as follows (to be expanded as necessary):

1. You stay CALM
2. Keep the victim CALM
3. Bring the CONTAINER or label to the phone
4. CALL Hawaii Poison Center 941-4411 or 911 to be connected to the Center
5. CONTINUE to stay on the phone until the emergency response person hangs up (allowing for connection to the poisoning center and accurate assessment and treatment for poison exposures).

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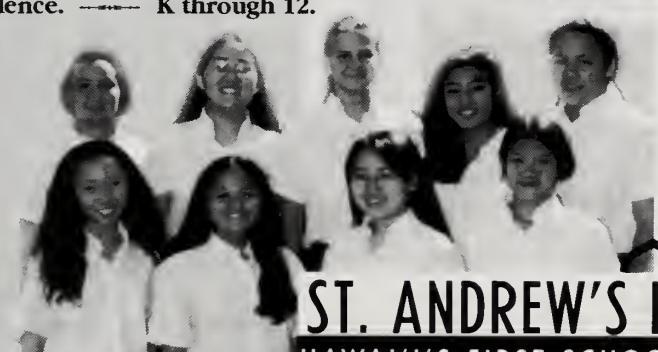
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Hawaii Poison Center Data Reveals a Need for Increasing Hazard Awareness About Household Products

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This study examined for the fiscal years 1995-1996 and 1996-1997, the frequency of calls to Hawaii Poison Center related to household products and pesticides poisoning, the frequency of the source of calls (professional versus layperson), and the patient's age distribution. The data was compared with the data recorded in 1989 which was reported earlier in the literature. We found the most frequent calls were from general public (6 to 8 times) and were related to household products (30% in 1996-97, 39% in 1995-96, and 39% in 1989) involving children less than 5 years of age. Results strongly suggest the need for increasing the awareness of hazards related to household products amongst the general public.

Introduction

Researchers in the field of emergency medicine have reported the vulnerability of children to household poisoning. Sixty-six percent of the 1,837,939 enquiries reported to the American Association of Poison Control Centers National Data Collection System in 1991 were related to children under 13 years.¹ Children under 10 years accounted for 52% of the 10,719 enquiries to the Honolulu Poison Center (HPC) over a 13 month period in 1989-90, 42% of the 12,667 enquiries to the Portuguese Poison Center in 1991 and 41% of the 8,144 enquiries received by the Irish National Poisons Information Center in 1991.^{2,3,4}

In the 1982-1988 United Kingdom home accident surveillance system, 15,144 pediatric cases of suspected poisoning were recorded.⁵ Only 514 (3.4%) of the 15,144 cases involved pesticide poisoning. In the 1989-1991 United Kingdom home accident sur-

veillance system, 6,478 pediatric cases of suspected poisoning were reported.⁶ Only 250 (4%) of 6,478 cases involved pesticides. Despite the fact that pesticides contribute to a small fraction of the suspected poisoning, researchers have focussed primarily on pesticide cases. The 1989-1990 HPC reported data did not have a separate category for pesticides, which were included under household items.² Even though 1989-1990 HPC data clearly shows that the most frequently involved substance was a household product, the authors did not emphasize it being of any particular importance. The authors of this paper were unable to locate any literature related to suspected poisoning from household hazardous products except one warning message transmitted on November 7, 1996 to the public via PR NEWswire over the internet from the American College of Emergency Physicians. The warning described the circumstances under which two toddlers nearly died after coming in contact with a very small amount of widely available car wheel cleaner. The following is an excerpt from the warning message:

Each child was rushed to the emergency department after becoming drowsy and vomiting, but other signs of chemical poisoning were not initially apparent. Both children appeared to get better, then experienced cardiac arrest. When the parents remembered that their child had been playing near a bottle of ARMOR ALL^(TM) Quicksilver wheel cleaner, emergency physicians were quickly able to diagnose and treat for poisoning. One child, who was believed to have been sprayed with the cleaner, has some long-term motor and speech delays. The other child recovered completely.

The Emergency Physician pointed out that the poisoning was attributed to hydrofluoride acid-like substances, mainly ammonium bifluoride and that less than one teaspoon of the ammonium bifluoride mix can prove dangerous to children. The message further stated that the U.S. Consumer Product Safety Commission (CPSC) had received several reports of adverse health effects associated with products containing ammonium bifluoride.

Household hazardous products are stored in almost every room of a typical American home—cleaners in the kitchen, fresheners in the bathroom, and hobby supplies in the workroom, to name a few. Accidental releases or incorrect use of these products may create unnecessary health risks for family members. It is reported that a typical household contains 60 hazardous chemical products such as paints, glues, cleaners, disinfectants, metal polishers, stain remov-

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ers, paint strippers, oven cleaner, pesticides etc. Some are either toxic, flammable, corrosive or chemically reactive.⁷ In order for all consumer product manufacturer's to comply with the Occupational Safety and Health Administration's 1985 Hazard Communication Act, CPSC enforced the requirement of certain signal words for example POISON (meaning highly toxic), DANGER (meaning extremely flammable, corrosive, or highly toxic), WARNING (meaning moderate hazard), CAUTION (meaning low hazard) on labels of household products containing hazardous ingredients.

The potential for accidental exposure to hazardous chemicals exists in an occupational setting, or community setting or in individual homes. The OSHA's Hazard Communication Act (HCS) of 1985 provides an excellent mechanism by which the workers in any occupational settings are ensured receiving the necessary and essential hazard information.⁸ HCS is designed so that employers who simply use chemicals, rather than produce or import them, are not required to evaluate the hazards of those chemicals. Chemical manufacturer's, importers, and distributors of hazardous chemicals are all required to provide the appropriate labels and material safety data sheets (MSDS) to the employers to which they ship the chemicals. The information is to be provided automatically. However, consumers of hazardous products are just provided with fine print labelling on the products. The authors of this paper strongly believe that very few consumers are even aware of the existence of the signal words on the label and amongst those who read it very few understand the real meaning or know that they have a right to request a MSDS from the dealer for health and safety reasons. No voluntary effort is demonstrated by the shop owners to provide MSDS's to their customers.

This paper attempts to find for the fiscal year 1995-1996 how frequently the Hawaii Poison Center received calls related to household products and pesticides incidents, and which category (professional versus layperson) of the population constituted the most frequent callers. Further, it attempts to investigate the patient's age distribution regarding toxic exposure to household products and pesticides.

Methods

This study involved reviewing the Hawaii Poison Control annual reports for the fiscal years 1995-1996 and 1996-1997. Data of the total number of calls by source (professional versus lay person) were compiled and categorized from the 1995-1996 and 1996-1997 HPC annual reports. The Hawaii Poison Center provided exposure data related to household products and pesticides for the fiscal years 1995-1996 and 1996-1997. Data obtained from the HPC for the number of calls by source for the last two years for exposures from household products and pesticides were compiled and categorized. Further data for the patient's age distribution regarding toxic exposure to household products and pesticides by age group was compared with that of HPC 1989-1990 data.

Results

Table 1 indicates household products to be the most common substance of poisoning (30% of 10,778 calls in 96-97, 39% of 10,044 calls in 95-96, and 39% of 11,158 calls in the 13 month period of 1989-1990) reported in Hawaii followed by medications (prescription and OTC) and bites/stings. Calls related to pesticide poisoning

Table 1.—Number and Percentage of Calls to HPC related to different substances for the fiscal period 1996-1997, 1995-1996, and January 1989-January 1990.

Substance Type	1996-97*	1995-96**	1989***
Household products	3,238 (30%)	3,873 (39%)	4,357 (39%)
Prescription Medication	2,514 (23%)	3,363 (34%)	1,421 (13%)
OTC Medication	1,755 (16%)	NA?	1,694 (15%)
Bites/Stings	1,306 (12%)	1,357 (14%)	914 (8%)
Pesticides	670 (6%)	694 (7%)	NA
Plant	597 (6%)	757 (8%)	2,331 (21%)
Food	509 (5%)	NA	NA
Street Drugs	98 (1%)	NA	51 (1%)
Liquor	91 (1%)	NA	29 (0.3%)
Other	NA	NA	229 (2%)
Unknown	NA	NA	132 (1%)
Total	10,778 (100%)	10,044 (100%)	11,158 (100%)

NA: Not available

*Data from HPC Annual Report (1996-1997, page 20)⁹ modified by combining the value for Industrial products (non-pesticide) with Household product.

**Data from HPC Annual Report (1995-1996, page 8)¹⁰ does not sub-categorize medications by prescription and OTC. Hence NA? is against OTC. Further the ordering of the variables Pesticides and Plant is interchanged to match the current tabular listing.

***Data from Yamamoto, 1991, Table 3, page 145 modified by including stings/bites under variable Substance class and assuming Natural items to mean category Plant and Food.

Table 2.—Number and Percentage of Calls to HPC during the three periods (1989-1990, 1995-1996, and 1996-1997) Related to household products and pesticides exposure by age group.

Age Group (years)					
Data Year	<6	6 - 15	>15	Unknown	Total
1989-90*	2,586 (59%)	257 (6%)	1,329 (31%)	185 (4%)	4,357
1995-96 (Household) products	1,749 (54%)	226 (7%)	867 (26%)	411 (13%)	3,253
1996-97 (Household) products	1,708 (54%)	218 (7%)	841 (26%)	418 (13%)	3,185
1995-96 (Pesticide)	209 (30%)	32 (5%)	239 (34%)	214 (31%)	694
1996-97 (Pesticide)	183 (27%)	20 (3%)	206 (31%)	259 (39%)	668

*1989-90 HPC data did not have a separate category for pesticides.

are only 6% in 96-97 and 7% in 95-96. Pesticide is not listed as a separate category in 89-90 data. It is possible that pesticide was included with household products thus explaining a higher rate of 41%.

The general public (lay person) was found to be the most frequent caller, constituting 86% and 87% of the total calls during the fiscal years 1996-1997 and 1995-1996, respectively. In other words, the general public called six times more frequently than professionals. Similarly when the data were classified considering exposures related to household products, the ratio of the calls from the general public to that of professionals was 8 and 6 times. Additionally when the data was classified considering exposures related to pesticides, the ratio was 3 and 4. The ratio is lower for pesticides indicating more professionals called when pesticide poisonings were involved. (Table not presented)

Table 2 shows the patient's age group distribution for the 13 month period of 1989-1990, the fiscal years 1995-1996 and 1996-1997 relative to data for household products and pesticides exposure. The 1989-1990 data did not have a separate category for pesticides. For household products children aged less than 6 years of age were most frequently involved, with more than 50% constituting this group. The age group 6-15 were the least frequent with just 6 to 7%. This was true for all three periods considered. In the case of pesticides, the age group less than six years and the group greater than 15 years old had almost equal rates with 30% and 31% in the fiscal years 1995-1996 and that for the year 1996-1997 being 27% and 31%, respectively. Further in the case of pesticides, higher rates

of "unknowns" in terms of age exist indicating some lapse in data entry.

Conclusions

Results from this study strongly suggest the need for increasing the awareness of hazards related to household products amongst the general public. It will be useful to conduct an in-depth review of the case reports (both retrospective and prospective) related to household products to obtain information about the type of household product, circumstances of exposure and severity. This will enable future development of training materials to educate the public about the adverse health effects and potential dangers of household products containing hazardous chemicals. Further, it is recommended that family physicians and pediatricians can play an important role by routinely advising parents with children below 6 years of age to be cautious when using consumer items labeled with poison, danger, warning and caution signs.

Acknowledgments

The authors would like to thank Debbie Ahina, of the Hawaii Poison Center, Honolulu for her assistance with this study.

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"Inside 'Da Poison Center'"

Amy Shimamoto, RN, CSPI and Debbie Ahina, RN, BSN

The wide variety of calls received by the Hawaii Poison Center are described. These include the typical, humorous and calls unique to the islands. Methods include descriptive anecdotal recall and review of Hawaii Poison Center call statistics. A brief description of staff, resources and call taking procedures are also provided.

It's 7:00 a.m. Monday morning at the Hawaii Poison Center (HPC), and one of the center's five phone lines rings. The registered nurse (RN) specially trained in poison information answers, "Hawaii Poison Center, how may I help you?"

A distraught mother is calling because her pediatrician's office has not yet opened. "My baby wen drink some stuff that my husband rubs on his head to make hair grow. She's okay. She goin' be okay?"

The RN obtains the information needed to assess the toxicity of the ingestion. She explains that Minoxidil lotion is also used to treat hypertension and based on calculations, the amount involved could be dangerous. Mother is instructed to take her child and the bottle of lotion to the closest emergency room (ER) now. The RN notifies the ER and treatment recommendations are given including faxed information. Follow up calls are made to ensure that the child got to the ER and to obtain her disposition.

At 7:10 a.m., the neighbor island toll-free phone line rings, and the RN speaks with a father on Maui who wants to bring his son to the ER. She reassures him that a bowl of dog food eaten by his 18-month-old son is not toxic. The father sighs with relief because he would have taken his son to the closest ER - an hour and a half away!

Then the 911 phone line signals an emergency situation. A mother is crying because her 16-year-old son has taken 15 extra strength acetaminophen tablets about four hours ago and is vomiting. "He's been under a lot of pressure at school," sobs his mother. The nurse stresses the urgency of immediate medical treatment at the closest ER to prevent hepatotoxicity and also suggests psychiatric intervention.

The Oahu phoneline rings again. An ER physician calls for assistance in determining the level of toxicity for a 3-year-old child who has ingested children's chewable multivitamins with iron. The RN quickly completes the toxicity calculations and provides treatment recommendations.

Monday mornings are usually busy, and today is no exception.

Common Hazards In The Home

Almost one-half of the poison exposures (4,269) reported to the HPC last year involved prescription and over-the-counter medications.¹ Analgesics (acetaminophen, ibuprofen, opiates, non-steroid anti-inflammatory drugs), cold medications (antihistamines, decongestants) and multivitamins (with iron) are frequently involved because they are often in child's reach. Other common medications are sedatives, antidepressants, albuterol, theophylline, fluoride and cardiovascular drugs.

Over one-third of the poison exposures (3,018) involved household products last year.¹ The most common items are cleaning products such as bleach, desiccants, gasoline and personal care products such as nail polish remover.

Some incidents are related to look-alike products such as eating chocolate laxative tablets that resemble a chocolate candy bar, or using denture cleanser tablets instead of alka seltzer tablets.

A little peace and quiet—no lines ringing. Time to complete the day's case documentation, do follow up calls, and have a bite to eat. But then within a period of ten minutes, there were three calls.

A tube of fluoride toothpaste is never locked up. A concerned mother calls, "My three year old son was brushing his teeth and wen eat the *whole* tube of toothpaste. He looks happy and says it tastes ono. I heard that the fluoride is poisonous. Is he gonna be okay?" Calculations based on the amount ingested and the child's weight warranted a referral to the closest ER for the treatment of fluoride toxicity.

Combining household bleach with any cleaning product may result in chlorine and/or chloramine gas toxicity. "I was pouring bleach into my toilet and I took a whiff of the fumes. My eyes are burning, and my nose and throat hurts. What should I do?" The RN determined that the caller had poured toilet bowl acid cleaner prior to the bleach. This combination may result in symptoms of coughing, choking and dyspnea. She instructs the caller to ventilate the area, move from the toxic environment to fresh air, dilute with a glass of water and call 911 if respiratory distress develops.

Gasoline (hydrocarbon) is poorly absorbed from the gastrointestinal tract but may result in serious problems with aspiration. "My husband swallowed some gasoline while siphoning from the lawn mower because we ran out of gas in the car. He looks okay but he's burping a lot and wants to vomit." The RN instructed decontamination of the oral cavity, dilution with milk and observation for symptoms of aspiration and gastroenteritis.

Unique Island Toxins

The Hawaiian Islands are surrounded by thousands of miles of open ocean and contain unique plants and animals. The HPC has specific information for indigenous plants, insects, venomous marine organisms and tropical fish poisonings.

Scombrotoxicity and ciguatera are the two most frequently occurring types of fish poisoning in Hawaii. Scombrotoxicity occurs when spoiled fish, primarily mahimahi, tuna and related species are eaten. The disease is often misdiagnosed as a "fish allergy." A young male caller had just eaten a mahi plate at a popular local restaurant about 10 minutes ago. His symptoms included "nausea, throbbing headache and dermal flushing." He denied any respiratory difficulty. The RN responded that it was probably related to Scombrotoxicity fish poisoning which is usually mild and self limited, resolving in

Experts at the Hawaii Poison Center

These are real cases representing the typical calls that Amy Shimamoto, R.N., CSPI, has handled during her 16 years of experience manning the HPC's hotline. Shimamoto is the State's only Certified Specialist In Poison Information (CSPI). CSPI's are RNs who have successfully passed the American Association of Poison Control Centers (AAPCC) national certification examination which includes questions on the signs and symptoms of toxicity, inherent toxicity, cause of toxic manifestations, calculations, triage and treatment. The candidate must have at least one year or 2,000 hours of experience providing telephone poison center consultations and have handled an accumulated 2,000 cases.

The RNs are specially trained in poison information and telephone interviewing techniques. The RN may answer as many as five calls at one time during peak hours. Each call is quickly triaged according to severity of toxicity. After the initial triaging, the RN immediately obtains vital specific information - the suspected poison and amount, route of exposure, the victim's age and weight, symptoms, elapsed time since exposure, events of the incident and any pertinent medical history. Callers are usually very cooperative, but there are times when they become angry and upset because the RN is asking them questions instead of telling them what to do. The RN then calms the anxious, sometimes hysterical caller, explaining the necessity for this information in order to determine the accurate assessment and appropriate treatment recommendations.

Once the information is obtained, the RN searches the Poisindex for the name of the specific product and ingredients.

Poisindex is a comprehensive toxicology database with over one million commercial, pharmaceutical and biological substances, updated every 90 days. Each substance is linked to one or more management protocols providing information on clinical effects, range of toxicity, and treatment protocols.

The RN reviews the toxicologic management protocols and calculates toxicity. *The Poisindex is a valuable source of information, but making the correct assessment and treatment recommendation requires the judgement and expertise of a trained professional.*

Other databases used include *Identidex* (tablet and capsule identification), *Drugdex* (drug evaluation), *Drug Reax* (drug interactions), *Tomes System* (industrial), *Toxicity Nomogram* (for specific drugs) and *Martindale* (international drugs). The HPC also maintains a unique reference library of general toxicology, drugs, pesticides, plants, insects and dangerous marine organisms.

Follow up calls are made to determine the status of the victim and compliance with treatment recommendations. The RN stresses the importance of poison proofing the home and keeping Ipecac Syrup available (to be used only on the advice of the HPC). Callers are offered poison prevention literature and phone stickers. Last year HPC provided over 4,600 follow up calls.¹

Complete documentation is recorded on a call sheet by each RN. Information is then entered into the HPC database for statistics. Call sheets are filed at the HPC, handled as a medical record, and reviewed for quality assurance.

three to 36 hours. Treatment recommendations included drinking copious amounts of water and observing for vomiting, diarrhea and abdominal cramping. She instructed the caller to go to the closest ER if respiratory difficulty and chest tightness developed and followed up with him within the hour to check on his status.

Common plant exposures are chili pepper, taro, dieffenbachia, mango and mushrooms. A mainland visitor purchased taro leaves to make a green salad without realizing they should not be eaten raw. With the first bite, she experienced intense pain in her mouth and called the HPC within five minutes. Taro contains large amounts of needle-like calcium oxalates which may produce pain and edema of the mouth, tongue and throat, possibly causing respiratory distress. These oxalates are dissolved in the process of cooking and hence the cooked leaves (luau) are not irritating. The caller was instructed to flush her mouth with milk to rinse the crystals, dilute with cold milk or water, suck on ice or popsicles and observe for respiratory difficulty.

An abundance of wild mushrooms appear with the frequent island rains. "My three kids were playing outside and eating the mushrooms that were growing in the yard. Is there anything to worry

about? They look fine." The RN explains that we do have the close relatives of the deadly genus *Amanita* mushrooms in Hawaii. As these mushrooms are difficult to identify, the mother was instructed to take all three children to the closest ER now with the specimen. The ER was notified and provided with treatment recommendations and referrals to mushroom specialists at the university.

Centipede bites are one of the more common bite/sting calls that the HPC receives throughout the year. The number of calls increase during the rainy seasons and in areas that are wet and lush with greenery. "Eh, I goin' die or what? Dis orange centipede wen bite my toe when I was putting on my shoe. Da bugga was really long. My toe is really sore and fat. So what, I have to go to da hospital?" The RN reassures the caller that the bite is extremely painful, but not deadly. The treatment recommendations that were given included observation for anaphylactic reactions, dermal decontamination and treatment, intermittent cool compresses, usual medication for pain, infection precautions and tetanus update.

Hawaii's species of scorpion and brown recluse spider venoms differ in their degree of toxicity compared to other regions. The Hawaiian scorpion species *Isometrus maculatus* may sting humans



Amy Shimamoto, R.N., C.S.P.I., has helped thousands of people over the Hawaii Poison Center's hotline during the last 16 years

in self defense but it's venom is not dangerous. Hawaii's *Brown Violin Spider* is a close relative of the mainland's infamous brown recluse spider. Its venom is less toxic.²

One of the most common venomous marine organism exposures are jellyfish stings, specifically box and portuguese man-of-war. Stings are nonlethal but may result in severe anaphylactic reactions.

Since Hawaii is the only rabies free state in the United States for dog bites, the RN is able to reassure the caller and thereby eliminate the need for aggressive treatment.³ Infection precautions and tetanus update are advised.

Hawaii's cosmopolitan population includes different cultures and languages (including pidgin and local slang) that require special communication skills. A victim calls because he stepped on a *wana* (sea urchin). Treatment recommendations include hot water therapy as the venom is heat labile. "My son ate a *make-man flower*. Is it poisonous?" "Make" means "die". The RN inquires whether the caller is referring to the oleander or plumeria. Plumeria trees often planted in cemeteries are gastrointestinal irritants when ingested and may produce dermatitis. Oleander plants contain cardiac glycosides and may be deadly.

Challenging, Yet Humorous At Times

Working in the HPC can be stressful, but it is interesting, rewarding and unpredictable. Staff are trained to conduct themselves in a professional, courteous manner, and deal supportively with all callers. But at times humor is no stranger behind the scenes.

A female caller was concerned that the vaginal tablets that her physician prescribed were very difficult to swallow because they were "so big."

A male caller discovered that he had inadvertently used an herbicide spray to fry ahi poke and inquired whether he could still eat it.

A three-year-old screaming child is stuck standing on the kitchen table. Her frantic mother called for help. Her daughter apparently climbed onto the table where mom was using Super Glue and stepped on the open tube. The initial treatment is warm soapy water soaks and softening with cooking oils, but these measures usually require time. The RN recommended the quickest and most effective treatment of applying nail polish remover with acetone followed by

decontamination with soap and water.

Although the majority of calls are human exposures, the HPC also receives about 300 calls a year from pet owners regarding their dogs, cats, rabbits, turtles, pigs, chicken and horses. "My cat ate one acetaminophen tablet." One tablet ingested by a cat is a serious problem because cats do not have the ability to metabolize acetaminophen, and therefore, no dose is safe. The HPC refers pet owners to their veterinarian or to an emergency animal clinic, and provides animal poisoning information to veterinarians.

And there are some requests from callers wanting a little too much information such as "How much acetaminophen does it take to kill someone?" or "Where can I buy cyanide?" The RNs do attempt to find out what's behind the question, is there an exposure, is there a victim involved, or does this caller need to be referred to the suicide or crisis line.


A day at the HPC is fascinating and challenging, whether the nurse is a 16 year veteran of the Center or a recently trained staff. Many families and medical professionals express their appreciation of having the HPC available in their time of need.

The RN answers her last call from a frantic mother regarding a corrosive substance, "My baby drank oven cleaner! Tell me what to do until the ambulance gets here!"

The phonelines continue to ring....the shift changes....another RN answers, "Hawaii Poison Center, how may I help you?"

References

1. Hawaii Poison Center: Hawaii Poison Center Annual Report 1996-1997. Honolulu, HI: Hawaii Poison Center, 1997.
2. Nishida, G.M., Tenorio, J.M.: What Bit Me, University of Hawaii Press: 1993;13, 27.
3. Benenson, A. S.: Control of Communicable Diseases in Man, 1990, American Public Health Association: 353.



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Council Highlights

Friday, February 20, 1998
Roger Kimura MD, Secretary

The meeting was called to order by Dr Leonard Howard, President-at 5:45 p.m.

Present were Drs P. Chinn, President-elect; J. Spangler, Immediate Past President; R. Kimura, Secretary; C. Kelley, Treasurer; A. Bairos, J. Betwee, W. Chang, H.K.W., Chinn, C. Goto, G. Goto, P. Hellreich, C. Kam, P. Kim, A. Kunitomo, B. LeeLoy, C. Lehman, J. Lumeng, J. McDonnell, G. McKenna, W. McKenzie, S. Saiki, M. Shirasu, M. Sia, C. Sonido, R. Stodd, S. Wallach.

HMA Staff: J. Won, B. Kendro, N. Jones, H. Singh, J. Asato, P. Kawamoto, A. Rogness-recording secretary.

Minutes: The minutes of the December 12 meeting were approved as circulated.

Secretary's Report: Dr Kimura reported that membership numbers are similar to last year although there is an increase in resident members.

Treasurer's Report: Dr Kelley reviewed the financial reports, announced that CPA's Nishihama and Kishida have been hired to do the 1997 tax return for the Hawaii Tumor Registry and Community Research Bureau; and reported that the 1996 audit for the HMA is near completion. As soon as the audit has been completed, the 1997 auditor will be selected.

President's Report: Dr Howard reported that: 1) the Queen's Workers Comp/No Fault Contract was reviewed by the Health Care Coalition and objections were noted. The St. Francis contracts were also reviewed and changes have been sought. 2) the legal case by HMA members against PGMA has been filed; 3) since the last Council meeting Dr Howard visited Kauai County Medical Society, West Hawaii Medical Society, and the North Hawaii Community Hospital; 4) a six-person HMA delegation attended the 50th Anniversary of the celebration of the re-establishment of the new Hiroshima Prefectural Medical Association, (5) the report of the Long Range Planning Committee was distributed; 6) Responses to the membership survey will be considered at the next meeting.

Component Society Reports

Maui.—Dr J. Betwee reported that Maui County Medical Society featured a meeting on Medical Malpractice with speaker Gary Hagerman, defense attorney.

Honolulu.—Dr C. Goto reported that an HCMS General Membership meeting was held on computer billing featuring three vendors. The April meeting will be a Mediterranean dinner and wine tasting.

Kauai.—Dr G. McKenna reported that Kauai County annual meeting elected Dr T. Magoun as president. Dr Howard and Mr. Won attended the meeting to bring the members up-to-date on what HMA is doing and discuss the legislative initiatives.

West Hawaii.—Dr A. Bairos reported that Dr Howard and Mr. Won attended their county meetings in North Kohala and Kona.

Hawaii.—No report.

Action taken: Council approved the American Cancer Society nomination of Paul DeMare, MD to be a member of the HMA Cancer Commission. Also approved was the Annual Meeting Committee's recommendation to set the exhibitor fees at \$975.

Alliance.—Dr Kimura reported that the liaison committee was charged with reaching a working agreement with the Alliance to assist with administration activities. The agreement was not completed inasmuch as the Alliance annual meeting was not held and new officers were not elected. Dues that were forwarded to HMA were returned to the sender noting that dues should be forwarded directly to the AMAA in Chicago.

A motion was passed to notify the acting Alliance president that no further action will be taken regarding the contract and that the HMA will not recognize an Alliance given the current situation. The American Medical Association Alliance will also be informed.

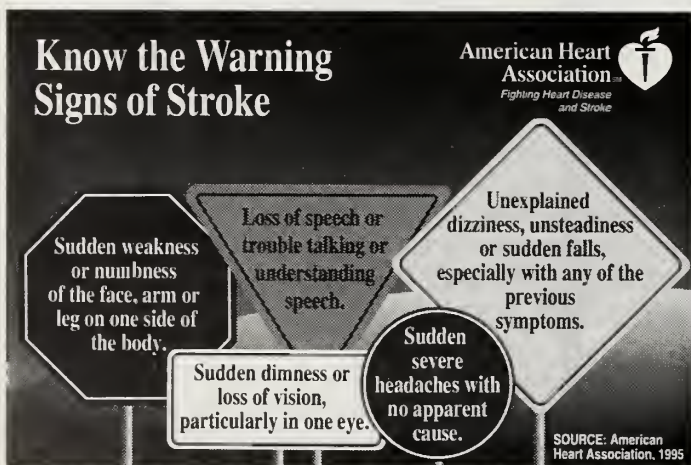
Legislative Report.—Heidi Singh prepared a detailed report for Council regarding issues currently before the legislature. It was reported that crossover at the legislature is March 6.

Annual Meeting.—Although the Council had previously given approval to holding the 1998 in Honolulu, it was not possible to reach a favorable contract. The Annual Meeting Committee recommended that the meeting be held at the Kauai Marriott, October 22-25, 1998.

OMSS.—New HCFA Rule on Conditions for Participation. The HMA Organized Medical Staff Section met to discuss proposed HCFA rules. Objections were sent to HCFA and to Hawaii's Congressional representatives.

The AMA Interim Meeting 1998 will be held at the Hilton Hawaiian Village. HMA will host a Luau.

Meeting was adjourned at 7:35 p.m.



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Life in These Parts

The Healing Touch (Laying of Hands)

(A QMC program)

The concept of energy healing comes from a long line of ancient cultures: (In India it's called *prana*; in China, Thailand and Japan it's *ch'i* or *qi*; and in Hawaii *mana*)

Chuck Wall, 57, HEI Inc. VP received daily healing touch treatments while semiconscious for two weeks after an acute MI. About his extraordinary recovery, Chuck says, "The universe is made of nothing but energy. Einstein proved that clearly human contact, human touch and human caring is a powerful force." (*Mid Week March 4 '98*)

The Man Who Made 600 Babies

Phil McNamee, 61, won the campus table tennis championship, as an undergraduate at Northwestern U. Fortunately for us, he became interested in infertility while a med student at Stanford. Thirty five years later, through in vitro fertilization, he has delivered 600 children, including his own 3 grandchildren. After training on the mainland, he formed the Pacific In Vitro Fertilization Institute with physicians **Benton Chun**, **Thomas Kosasa**, **Carl Morton** and **Francis Terada** and lab director **Thomas Wong**. The institute is the 17th largest of 310 such clinics in the U.S. and rates in the top 10 percent in success rates.

Besides making babies, Phil still wields a mean ping pong paddle and is married to a former Stanford coed, **Carol Hodgson** who is the founder of MADD (Mothers Against Drunk Driving).

Medical Alert

The National Kidney Foundation of Hawaii reports that kidney failure is 30% higher in Hawaii than the national average.

The causes of kidney failure in Hawaii are:

- Diabetes 48%
- Glomerulonephritis 25%
- Hypertension 10%
- Other causes 16%

Dialysis by ethnic groups

- Japanese 26%
- Filipinos 23%
- Hawaiians 19%
- Caucasians 11%
- Chinese 7%
- Koreans 2%

The National Kidney Foundation of Hawaii is not an Aloha United Way member and does not receive funding from its national office. To help, call 573-1515. (*From Foundation President Roland Ng's speech*)

Hors De Combat

On March 3, the Supreme Court ruled favorably in a Hawaii medical practice case viz that people can file for bankruptcy and avoid paying damages for harming someone so long as they didn't intend to cause injury.

Hawaii physician **Paul Geiger** (who did not have malpractice insurance) filed for bankruptcy and asked to be freed from a \$355,040 damages award incurred when his treatment of a woman's leg infection led to amputation and her subsequent demise.

Justice Ruth Bader Ginsburg (Ed. bless her heart) wrote for the court that "People who file for bankruptcy cannot be forced to pay for injuries they cause when an act is intentional, but injury is unintentional."

Elected, Honored & Appointed HMA Officers:

Belated congratulations to **Len Howard**, installed as HMA president at the 141 HMA meeting in October last year. Len is a board certified OB-GYN man who retired in 1994 after 20 years with Kaiser. Len is also an ordained Deacon in the Episcopal Church.

Patricia Chinn, Honolulu general surgeon, elected president-elect. Pat chaired the HMA Peer Review Committee, co-chaired the HMA Reorganization Task Force, and served as HCMS treasurer. **Charles Kelley**, Straub internist and occupational med specialist, will continue as HMA treasurer. And **Roger Kimura**, internist,

will continue as HMA secretary. **Calvin Kam** was elected AMA delegate; **Fred Holschuh** and **Stephen Wallach** were elected Alternate AMA delegates. Fred Holschuh was honored by his colleagues as the 1997 Physician of the Year. Hearty congratulations to **John Spangler**, outgoing HMA president.

HCMS Officers: At the November 23, 1997 Annual Meeting of the Honolulu County Medical Society, the following were installed: **Cynthia Goto**, president; **Cedric Akau**, president-elect; **Rhoads Stevens**, secretary; and **Laurie Tom**, treasurer.

Letters to the Editor (Star Bulletin Jan 8 '98)

"The Hawaii Medical Service Association has stated that unrestricted access to patient records is necessary to protect against fraud and abuse by providers.

How wonderful it would be if HMSA would reciprocate. We would then understand why our HMSA claims would be "in processing" since November last year or why it takes a year and a half to pay for anesthesia fees. (The letter writing to get action from HMSA took twice the time needed for surgery)

Is there some way that the public can be protected from fraud and abuse by HMSA?"

Walter Young MD

Physician Moves

January: Hematologist-Oncologist **Arnold K.N. Yee** opened his practice at St. Francis Outpatient Bldg., Ste. 308 and St. Francis West Medical Office Bldg., Ste. 108.

March: Pediatrician-Allergist **Jeffrey Kam** joined Straub King Street and Straub Pali Momi.

Quotes From Actual Medical Records (Hawaii Medical News July '97)

"Healthy appearing 69 year old male, mentally alert, but forgetful..."

"The patient has no past history of suicides."

"The patient's past medical history has been remarkably insignificant with only a 40 lb weight gain in the past 3 days."

"The patient refused an autopsy."

"On the second day, the knee was better and on the third day, it had completely disappeared."

"The patient had waffles for breakfast and anorexic for lunch."

(*From "Funny Bones" by Jeri Leong; medical practice consultant*)

The Olympian (Condensed version)

by Dr Beverly Goodwin, Kingston, Ont.

My usually serious, somewhat reserved secretary shot a wild-eyed, strained glance at me as she ushered in my next patient which suggested that she was vigorously suppressing an urge to snicker. The burly young man in the exam room rarely came to see me except for strains, sprains and other musculo-skeletal consequences of his construction work. Today Joe was squirming in his chair and would barely meet my eyes.

When I asked him the reason for his visit, he

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paused in acute emotional discomfort, then blurted it out defiantly, "I got Olympic Stain on my privates."

I struggled to imagine a scenario in which this might have occurred. Joe came to my rescue, explaining hurriedly that he'd been up a ladder staining his house when he accidentally spilled the contents of the can down the front of himself.

Remembering the admonition on the label to avoid skin contact, he leapt down the ladder and stripped to his undershorts, watering himself down with a garden hose, but it was several minutes before he was able to hit the indoor shower, shed his shorts, and rinse his "private"—said parts by then beginning to redden and sting uncomfortably.

Fear for his conjugal future had finally overpowered his reluctance to disclose (and disclothe) all in the presence of the "lady doctor."

By now the discomfort had subsided and the afflicted parts appeared normal. I was tempted to reassure him. Try as I might, I couldn't dispel the image of the Olympic Stain Episode coming back to haunt me. There was nothing for it but to call Poison Control. After considerable spluttering at the other end of the phone, and a careful review of chemical contents, I could confidently reassure a red-faced Joe that, while his "nether regions" might now be weatherproof and water resistant, he could otherwise expect no ill effects from his body-painting episode. The young Olympian scurried out of the office in great relief.

Potpourri

"Information...Can I help you?"

"I'd like the number of the Theater Guild"

"One moment please...(Pause)...I'm sorry sir. I have no listing for Theodore Guild."

"No, no...It isn't a person. It's an organization. It's Theater Guild."

"I told you sir! I have no listing for a Theodore Guild."

"Not Theodore! Theater! The word is theater! T-H-E-A-T-E-R!"

"That sir, is not the way Theodore is spelled."

Dr. Dara's Dairy

Excerpt therefrom: (*Stitches*, Jan. 1998)

Friday: I had a Japanese visitor as a patient today. He came in with his voluminous phrase book through which he was flicking vigorously as I came in. We went through some introductory bows.

"Sorry, I speak poor English," he said, reading off the book. I smiled as I quietly cursed the front desk. He continued, "I come to you because you are a great pathologist." Before I could correct him on the two errors in the last sentence, he added, "I have a pole in my ass." He then sat back in silence, staring at me. I returned his stare in silence, then finally asked to see the phrase book. Sure enough, there it was, just as he'd uttered it.

I motioned to the couch and five minutes later, after a good deal of wrangling, prodding, not to mention significant discomfort to my patient, it became apparent that the problem was one of hemorrhoids, or "piles."

Classified Notices

To place a classified notice:

HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in HMJ as space is available.

Nonmembers.—Please call 536-7702 for a nonmember form. Rates are \$1.50 a word with a minimum of 20 words

Office Space

Pearl City Business Plaza.—Tenant Improvement Allowances for Long Leases; 680+ sq ft; 24-hr security; free tenant/customer pkg; Gifford Chang 581-8853 DP, 593-9776, 531-3526.

Office Space.—Newly renovated office space to share—1500 sq ft in St. Francis Medical office bldg., preferably surgeons, fax: 537-4032.

Locum Tenens

Board Certified family practitioner.—Available for short term practice coverage. Liability insurance provided. Please contact: V. Braslavsky, MD (913) 383-3285. <http://www.concentric.net/~locumdr/1.htm>.

Take an Afternoon Off.—While your office stays open. Part-time primary care office coverage on a regular or occasional basis by longtime Honolulu physician. Contact John Wichmann-Walczak MD at 739-9483 or 524-2575.

Misc.

Latex Glove Relief.—Free evaluation sample of gel reducing irritation from latex, nitrile and vinyl gloves. Limit 1 per Hawaii member's office. Call and record complete address or send business card to Sahara Cosmetics, ph 808-735-8081, P.O. Box 10869, Honolulu, HI 96816-0869 USA.

Announcements

New Practice.—Dr Raymond D. Thompson announces the opening of his General Practice at the Ala Moana Bldg, 1441 Kapiolani Blvd., #1405, Honolulu, HI 96814-4407. Phone 943-0101.

New Office.—Dr Margaret Cheung, Ophthalmologist and Uveitis Specialist, St. Francis Medical office bldg., 2228 Liliha St., #301, Honolulu, HI 96817, ph: 521-3535, fax: 566-0014, and St. Francis Medical Plaza-West, 91-2139 Ft. Weaver Rd., #205, Ewa Beach, HI 96706, ph: 671-3535.

Moved.—Katz Orthopedic Surgery and Sports Medicine, Neil T. Katz MD, 302 California Ave., Suite 202, Wahiawa, HI 96786, Ph: 621-3838, fax: 622-1808, pgr: 581-5692. Patients may also be seen at our St. Francis West office.

New Practice.—Drs Tanguilig, Leialoha and Diniega have opened their OB/GYN group practice—Hawaii Women's Healthcare at Kapiolani Hospital, Suite 520, ph: 947-5606, and Waipahu office at Leetown Center, Suite B2-204, ph: 676-4718.

Internist/Pulmonologist.—Opportunity to join established Group Practice in Waimea, on the Big Island. Contact: Dr Sharon Vitousek or Dr John Dawson, Waimea Medical Associates, 667-1123 Mamaloahoa Hwy, #128, Kamuela, Hawaii 96743, Ph (808) 885-7351, Fax (808) 885-1795.

Nurse Practitioner.—APRN Hawaii, nationally certified, 25 years experience RN, 10 years experience as NP adult and geriatric focus. Seeks collaborative practice on Oahu P/T, locum tenens OK. Available May 1998. Please reply to: NP, 2440 Campus Road, University #356, Honolulu, HI 96822, message (808) 951-8288. Excellent references.

Volunteer Training with Hospice Hawaii.—20-hr course at Hospice Hawaii office. **June:** Wednesday, June 17, 6 to 10 pm. Sat., June 20, 8 am to 5 pm. Sat., June 27 8 am to 5 pm. For more information call 924-9255 ext. 219. Weekday volunteers are especially needed.

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I Never Forget a Face, but in your case, I'll be glad to make an exception.

That bureaucratic leviathan, the Health Care Financing Administration, continues to arbitrarily chop cataract surgery under the proposed rule of the federal budget act. Projections reveal that the average cataract reimbursement will drop from \$929 in 1997 to \$805 in 1998. Supposedly, there will be no net savings, but rather a redistribution of dollars to reflect a reimbursement shift from surgical specialties to primary care. The odious part of the changes is that they have no relevance to any parameters other than political perceptions, and the fact that cataract surgery is the most common (and successful) operation performed on the Medicare population. Moreover, one must wonder if primary care providers will receive any of the promised HCFA largesse.

There is no underestimating the intelligence of a political body.

In an unbelievable action, the Oklahoma Senate passed a bill permitting optometrists within the state to perform laser surgery. The legislation is designed to overturn a decision by an Oklahoma county District Court made last summer by District Judge Eugene Mathews. He ruled that optometrists could not perform laser surgery under the current abiding statute. The Oklahoma Academy of Ophthalmology (why not the Oklahoma Medical Association, also?) said the bill could seriously jeopardize the quality of eye care in the state and sets a dangerous precedent by lowering the standards of medical care. This issue involves eye care, but all of organized medicine must recognize this is not a turf battle, but redounds to every area of medical care involving the use of lasers.

A unit of blood is worth—a life; maybe your own.

A study reported in the journal *Blood* found that non-smoking men who donated a unit of blood in the preceding 3 years were half as likely to suffer a heart attack, stroke, or angina when compared with those who had never given blood. When blood iron is stored in high quantities, it is believed to trigger a series of vascular events which can lead to clogging of arteries. By donating blood, this likelihood is greatly reduced, so when the next blood drive is announced, or just any appropriate time, take an hour off to roll up your sleeve and give some of this most precious substance to the local blood bank.

It is all about power, friends!

Three years ago in California, a measure to restructure the California Medical Board from physician domination to lay-person majority, was defeated in committee. Backers of the measure believed that such restructure would lead to tougher scrutiny of health care providers. Now, a similar measure has been offered for restructure of the Podiatric Board, and it has a better chance of passing. Doctors groups are opposing the bill fearful that similar efforts would involve the Medical Board. And if California does eventually develop a lay-person dominated medical board, would our Legislature follow suit?

He wants a ticket to ride, but they don't care. (Beetles, almost)

Should a professional golfer have to walk the course in order to compete? Casey Martin won the Nike Tour's Lakeland Classic while riding in a golf cart. He has a rare circulation disease afflicting his right leg, and obtained a federal court order to let him ride in that competition. At the present time, PGA rules state that walking is a part of the game, and riding in a cart gives an unequivocal competitive advantage. Now Martin has won a suit against the PGA for a permanent "right to ride" under the Americans with Disability Act. The ADA was passed to prevent discrimination against the disabled in employment and public accommodations. To apply the ADA to competitive sport is quite a stretch, but hungry attorneys are perpetually creative. Is it appropriate for the courts to define rules for athletic associations?

These people are not your friends - C. Barkley

Another state legislature has added to the list of states granting patients access to physicians' malpractice histories. In Washington state a resident need only call the state department of health during business hours to obtain the license status, number of open and closed complaints and disciplinary history of any physician licensed to practice medicine. Additionally, the department routinely sends out press releases relating disciplinary actions taken against errant doctors. They even identify doctors who have

complaints filed against them which are still unresolved, and they provide a web page with the same information! Why not have a web page on each politician outlining attendance, voting record and history, educational background, all past and pending violations of law, vested interests, committees and attendance, family status, sexual preference, religious affiliation, etc., etc. Then we might understand where they are coming from.

Responsibility: Unto whomever much is given, of him shall much be required. (Luke 12:49)

Some managed care organizations, protected by the ERISA law, have made medical care decisions, but legally shifted responsibility to the doctor or nurse. Now legislation has been proposed to regulate managed health care, so that insurers and/or business organizations will be appropriately accountable. A political action group called The Health Benefits Coalition has unveiled a print ad featuring a picture of Frankenstein, "Be Careful How You Play Doctor. You Might Mandate a Monster." The aim of the ad is to defeat proposals regulating managed health care, with the claim that the measures could increase premiums and cause millions of Americans to lose their insurance. However, David Herbert, chairman of a coalition of patient-advocacy groups disputed the arguments. He noted that Medicare managed-care plans already had similar consumer protections enacted in last year's budget law. Moreover, a recent Kaiser Foundation-Harvard University public poll found that 88% said they favored a law requiring health plans to permit appeals to an independent reviewer.

Socialism relieves us of the necessity of living for others.

Under the President's latest proposal, Americans age 62 to 64 would be able to join Medicare, and also he would include those 55 to 61 who have lost their jobs. Looking at the predicted Social Security shortfall, Senator Phil Gramm said, "If your mother is on the *Titanic* and the *Titanic* is sinking, the last thing on earth you want to be preoccupied with is getting more passengers on the ship."

The machine is slipping from our hands as if someone else were steering.

A physician failed to diagnose a cancerous tumor, and the patient brought a malpractice suit. The initial complaint was in excess of his policy limit, but the patient agreed to settle for the limit. Wishing to avoid the stress and adverse media attention, the doctor requested that the insurer settle the complaint. The insurance company refused, and took the case to trial where a verdict was returned against the doctor in excess of his policy limit. The insurer intervened and obtained a settlement for the limit of the doctor's policy, but the physician brought suit against the carrier for bad-faith action for loss of property and emotional distress. The insurer maintained that a suit could not be brought except for pecuniary losses arising from excess liability. The trial court disagreed and said the case could proceed to trial.

The income tax has made more liars than golf has.

Further evidence that golfers are eccentric, comes from Ireland where a golfer developed hepatitis. Doctors were struggling for the source of his disease until he admitted that he licked his golf balls while playing through each daily round. It was his theory that "a clean ball is a faster ball." After determining what pesticide was used on the golf course, doctors surmise that the best guess is that the patient developed his liver inflammation from a weedkiller sprayed on the course. As for others likely to be on the fairway, bear in mind that the pesticide is still being used, so refrain from licking your balls.

Addenda—

- ❖ Loss of one eye will reduce the visual field by approximately 20% (depending on size of nose).
- ❖ America's first minimum wage, in 1938, was 25 cents an hour.

Aloha and keep the faith.—rts ■



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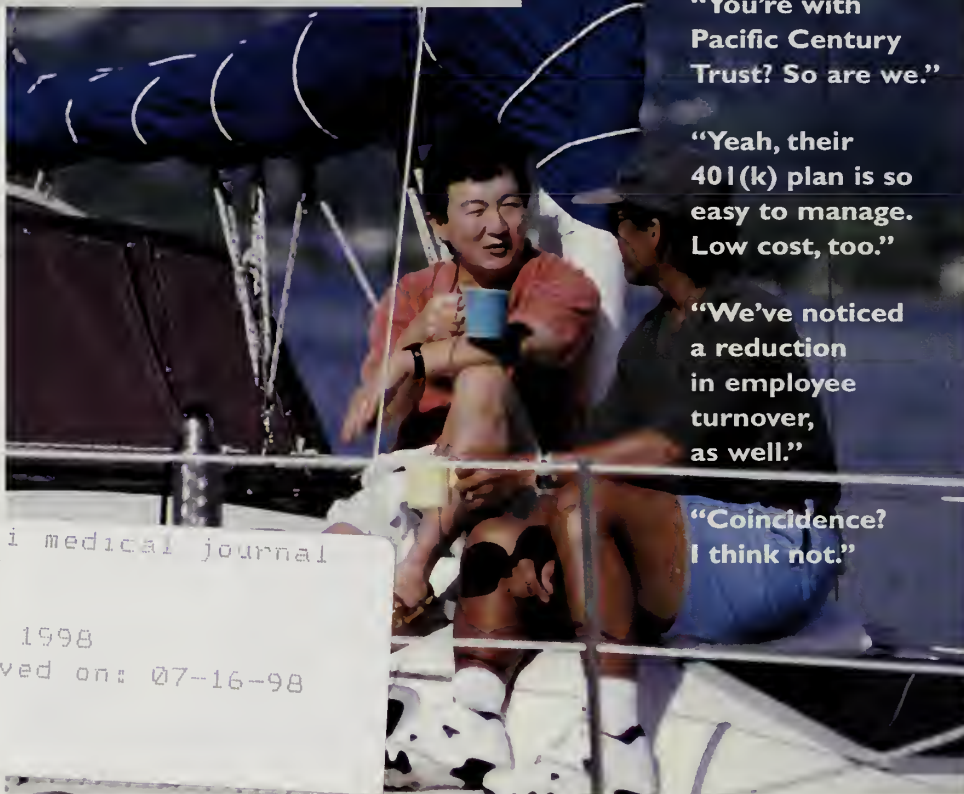
Sincerely yours,

A handwritten signature in black ink, appearing to read "Ron Neupauer", written over a horizontal line.

Ron Neupauer
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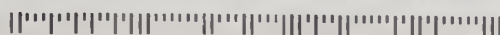
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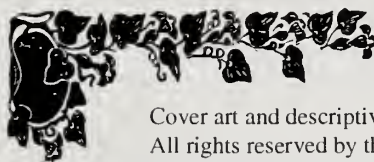
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Ē Hula Ē

Depicting a hula dancer surrounded by plants and implements related to the dance.

A Call to Physician Authors

We are always looking for interesting scientific articles and we would like to hear from more of you. The *Hawaii Medical Journal* is a peer reviewed publication and covers a wide variety of topics. To submit a manuscript please call us for manuscript guidelines. Fax or call for your requests to: Hawaii Medical Journal, 1360 S. Beretania Street, Second Floor, Honolulu, Hawaii 96814, Phone (808) 536-7702 or Fax us at (808) 528-2376, e-mail: hma-assn@aloha.net.

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Editorials

Socialization of Healthcare/Slice by Slice

Norman Goldstein MD
Editor

Richard Kelley, MD was and still is a pathologist. For many years, he worked with Drake Will, MD and Ann Catts, MD, and with Hawaii Pathologists' Laboratory at Queen's Medical Center.

His father, the late Roy Kelley, and mother, Estelle, began operating a small hotel in Waikiki years ago. Their hotel grew into a major chain - the Outrigger Hotels of Hawaii and Guam.

When the Outrigger organization needed help, Richard Kelley left medicine. No more autopsies, stains and slides for him. Rich performed surgery with the Outrigger organization and helped it to become the leading hotel complex in the Pacific.

As you will see in Dr. Kelley's Special Commentary on page 496, "The Socialization of Healthcare, Slice by Slice," he is still using his microtome. Thanks to *Pacific Business News* for permission to reprint his commentary.

THIS MONTH: We conclude our series on Common Sports Injuries as seen by the primary care physician in this Issue. The review by James Scoggin II, M.D. is an excellent manual for emergency rooms, pediatricians, and family practice offices.

S.Y. Tan, MD and Todd Kubo, MD are eminently qualified to answer some very important medial and legal questions dealing with HIV infections, as they do in this Issue. They are not only experienced physicians, they each have a "JD" after their "MD"s.

S.Y. Tan is also well know to Hawaii physicians, serving as Director of the Medical Ethics Dept. at St. Francis Medical Center, and as sponsor and director of many seminars dealing with medical ethics.

NEXT MONTH: The results of Dr Len Howard's survey of physicians as well as the Star-Bulletin/NBC Hawaii News Channel 8 surveys on Death with Dignity will be discussed.



President's Message

What Do We Want to Be? A Health Care Industry or the Profession of Medicine?

Leonard Howard MD

As I meet with various organizations that currently take a part in the delivery of medical care to the people of Hawaii, I am struck with the new "Politically Correct" terminology that is being used in oral and written communication. We are said to be "Health Care Providers" in the "Health Care Industry." We are given templates for creating medical records, so the complexity of our care delivered can be evaluated "objectively" to justify our claim for reimbursement. We are relegated to the Department of Human Resources in the new rules of compliance for Medicare Hospitals. We are no longer the determining factor in the quality of medical care delivered in the hospital. We are faced every legislative session with an avalanche of proposed legislation by which other "health care providers" will be able to carry out the same function previously restricted to Doctors of Medicine, simply in the name of "cost cutting."

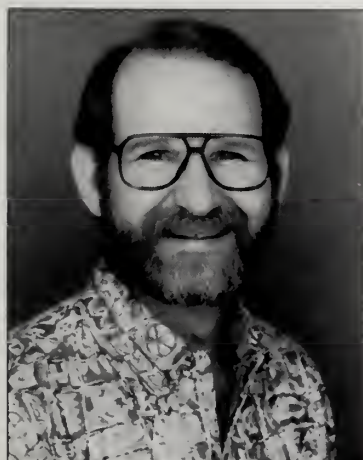
Looking at this situation from the perspective of organized medicine, I can only urge you to resist this denigration of our profession before it is too late. We are Physicians, Doctors of Medicine. We are not Health Care Providers, equated with nurses, chiropractors, and massage therapists. We do not have clients, we care for patients. The Oath of Hippocrates is meaningless in a service industry where everything is done according to protocols, checklists, and cook books. Privacy of Medical Records has no meaning to a clerk in a health insurance company who needs to see how many blocks can be checked off on her claim form to determine if the care was appropriate.

Colleagues, we have allowed this to happen to us. We have sat in our offices, telling each other learnedly "I just want to practice medicine. I have not got time to get involved in all that organized medicine stuff." As a result, your HMA counts less than half the physicians of Hawaii as members and the above situation exists.

It is time for us to say "Enough!" We are physicians, not health care providers! We practice the profession of medicine! We are not just members of a service industry. We care for our patients. We do not service clients.

There is another side to this issue however. If we demand to be treated as professionals, then we must act like professionals. There is no place in the profession of medicine for creative coding, 36 hours a day billing, and the other forms of fraud that have resulted in creation of Medicare Fraud Units. We cannot sit by and tolerate behavior by our colleagues that is non-professional. Peer Review means just that, we care about how medicine is practiced.

We have a choice to make. Are we going to be a profession, with all that entails, or are we going to be part of a big service industry? If



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we sit back and let the politicians and health administrators make all the decisions, we cannot complain when we have to comply with all the bureaucratic falderal that goes along with a service industry.

Speak out when others talk glibly about health care providers and how they are really all paid too much for what they do. Join your organized medicine components and let our collective voices be heard. We have seen what can be done when physicians cooperate toward common goals. We need all the physicians of Hawaii, working together, to send a message: "We are a profession and have pride in that profession."

In Unity there is Strength!



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Mother's Day Poem

Mahm

(Meaning Mother)

The sweetest word the world ever knew
Is spoken by my son at his tender age, two.
"Mahm," he says as he looks all about
It's never whispered, and you won't hear him shout.

Perhaps it's request much more than greeting,
And if there's no answer, he'll sure try repeating.
"Mahm," he repeats 'till his goal is complete...
But sometimes he says it just because it sounds sweet!

And *sweet* is that word, and sweet is its pitch...
With clear intonation in sounds bright and rich.
Immediate response is commanded by style...
Not just complying...but with a big smile!

"Mahm," he says and points to his cup,
Or holds up both arms, meaning, "please pick me up."
Sometimes his "Mahm" means, "I want to go play,"
Or "Please don't forget that at bedtime we pray."

But "Mahm" also clicks with his poem-penning Dad,
Who scribbled these thoughts on a green "Post-it" pad.
In searching for the essence of a word so profound
I reached deep inside me...and here's what I found-

"Mahm" means the source of sweet loving care.
It's the well spring of comfort and stuff *I too* share...
Like beauty and warmth and ideas for fun...
Trips to the beach, and protection from the sun.

And of thousands of things I surely could list -
But even with that, there would be some I missed.
So I'll sum up the meaning of this awesome word...
"Mahm" means, "I love you," in case you haven't heard!

Robert Swaim Flowers
And his son Christian, at Age 2

American Heart
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Fighting Heart Disease
and Stroke



**If you are what you eat,
why not cut back on fat?**



Medical School Hotline

Emergency Medicine in the Problem-Based Learning Curriculum

Eugene M. Kawaguchi, M.D., F.A.C.E.P.
Curriculum Specialist, Office of Medical Education
John A. Burns School of Medicine
University of Hawaii

Lesile O. Tam, Ph.D.
Director, Office of Medical Education,
John A. Burns School of Medicine
University of Hawaii

Since being officially recognized in 1979, Emergency Medicine is a growing medical specialty. Currently, over 100 Emergency Medicine residency programs across the United States graduate 800 residents annually, and almost 11,000 physicians are certified by the American Board of Emergency Medicine. Each year, two or three graduates of the JABSOM choose to enter Emergency Medicine.

The American College of Emergency Physicians (ACEP) believes that all medical students should be taught the basics of emergency medical care and that the public expects all medical students to be able to provide basic emergency medical care. The ACEP further believes that this can be accomplished by incorporating five essential topics of emergency medicine into existing curricula:¹

- Assessment of the undifferentiated patient
- Basic life support skills, including CPR
- Recognition and treatment of shock from all causes and in all age groups
- Basic procedural skills, such as airway management and venous access
- Differentiation of the acutely ill or injured patient and early management

The first two years of the John A. Burns School of Medicine (JABSOM) Problem-Based Learning (PBL) curriculum is unique, because the learning of basic and clinical science is largely self-directed and integrated around clinical health care problems (HCPs). In their first month of medical school, students at the JABSOM investigate many of the themes above. One of the first HCPs involves a 17 year-old high school student who suffers chest trauma in an automobile accident involving alcohol. At the Emergency Room (ER), the student learns that the patient's heart rate is high and blood pressure is low. Learning issues identified by students related to this HCP have included: the ABCs of trauma assessment, hypovolemic shock, management essentials for pneumothorax, essentials of managing thoracic trauma, the role of paramedics and Emergency Medical Technicians, and the emergency medical system. Students have investigated establishing rapport with adolescents, the medical interview in trauma cases, and how physicians provide reassurance to patients in the ER.² The self-generated learning issues above are in addition to basic issues about the


anatomy of the thorax, normal respiratory mechanics, hemodynamics, hemostasis, shock, and the pathophysiology of pneumothorax, among others.

A novel case is an 81 yr-old woman brought to the ER by a public health nurse. The nurse finds the elderly woman at home with ants, cockroaches and garbage strewn over the living room. There are no clean dishes, no soap, and the woman had been sleeping on a sofa blood-tinged from an open lesion on her back. Another case is a 32 yr-old homeless schizophrenic male who is treated in the ER for open sores on the foot and spreading cellulitis. These HCPs, among others, introduce the JABSOM student to growing use of the ER as a health care safety net. Today, the ER may be the principal provider of primary care to the poor, homeless, unemployed, substance abuser, elderly, and many others who have no regular source of health care. This emerging role of the ER physician stems from the Consolidated Omnibus Reconciliation Act (COBRA) of 1986, which mandates that any patient who presents to the hospital emergency department must be treated regardless of the diagnosis or ability to pay.

Survey of the 75 HCPs that medical students investigate during their first two years at the JABSOM reveals that 17 HCPs (22%) contain issues, in part, that introduce the student to the role of the ER in the health care system. The allure of emergency medicine as a growing medical specialty is due to a number of reasons, including the versatility of needed skills, the split-second decision-making required, the intensity, and the flexibility of 12-hour shifts.³ It may be also true that at the JABSOM, the PBL curriculum depicts the ER physician as a provider of both acute and primary care. The ER physician is challenged to respond both to life-threatening conditions as well as the public health needs of those who have no other regular source of health care. The latter may also help influence JABSOM graduates to enter this growing medical specialty.

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1. American College of Emergency Physicians: Guidelines for undergraduate in emergency medicine. 1997. *Ann. Emerg. Med.* 29:835.
2. Since learning is student-centered and self-directed, the Office of Medical Education in the JABSOM supports curriculum planners by tracking what students decide to study. Faculty can then influence what students study in subsequent years by writing learning cues and prompts into HCPs.
3. Gillespie, K.B. 1997. Life in the ER: On the front line of medicine. 1997. *N-J Med* 94:29-32.



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Commentary

The Socialization of Health Care, Slice by Slice

Dr. Richard R. Kelley

reprinted from Pacific Business News, January 26, 1998 issue

This past holiday season, I watched with pride as my 15 year-old son carved our Christmas turkey, golden brown and steaming from the oven. Now, in the cold light of a new year, that bird has become a metaphor for health care in the United States. It was the greatest system in the world — warm, succulent and nourishing. Now, slice by slice, the meat is being cut away, the stuffing scooped out, and soon only a bare carcass will remain.

The problem is the increasing socialization of health care. Ever since he took office, President Clinton has floated plans for different degrees of socialized medicine. The battle is far from finished. Just two years ago, in his State of the Union address, Mr. Clinton proclaimed, "The era of big government is over." Yet his recent actions prove once again that the basic agenda is still to put the entire health care industry under the control of the federal government.

Under new federal rules that went into effect on January 1, 1998, if a doctor treats even one Medicare patient during a two-year period, all of his or her other Medicare-eligible patients must also be treated under myriad federal Medicare rules and regulations. It is a felony to do otherwise or to even make an error in attempting to comply with those regulations.

As I will be 65 in a few months, I find that my ability to choose a physician and my physician's ability to choose my treatment have been suddenly and severely curtailed, and the situation is about to worsen.

In early January President Clinton called for Medicare to be expanded to cover people as young as 55 years old. The concept is to develop a new entitlement to the "near elderly" who risk losing their health insurance through layoffs or early retirement.

Unfortunately, history has shown that if this taxpayer-funded program is enacted, it will be another costly cut into the fabric of free enterprise and individual responsibility that has made the United States of America the envy of almost every nation on earth.

I am old enough to clearly remember the day Medicare legislation was first enacted. Although I agreed with the concept of quality, affordable health care for the elderly, I was outraged that it would be done through a government benefit program when so many private alternatives were available.

In my first published letter to the editor, I predicted that Medicare would cost much more than the amount forecast and, like the veterans' health care system, it would lead to a rationing of services and a decline in the quality of care.

Sadly, the costs of Medicare and Medicaid have grown astronomically. There also has been a decline in the quality of medical care and a rationing of services. Doctors are told to spend less time with individual patients, order fewer laboratory tests and x-rays. If hospitalization is required, they admit patients for the least amount of time, almost without regard to comfort, convenience and sometimes safety.

Not as evident, but probably of more concern, is that the best and brightest are no longer choosing medicine as a career, and many others are leaving the profession in droves. Physicians my age would normally have 10 or more highly productive years. Given today's health care environment, my medical school classmates from the 1960s are closing their offices. They cannot and will not put up with the bureaucratic nightmare that faces younger physicians today, let alone face the chance of a felony charge and jail for failing to comply with the complex federal rules and regulations. Those who remain are depressed, overworked and making daily compromises that are not in the best interests of their patients.

There is a simple remedy. Change federal laws to let all employees and Medicare/Medicaid eligible citizens receive cash into a Medical Savings Account, backed by a high-deductible private insurance policy. Patients can then choose their own physicians and the appropriate treatment. It is a simple concept that will break the government monopoly on health care.

A limited, pilot Medical Savings Account plan passed Congress and is being tested in 49 states. Unfortunately, here in the People's Republic of Hawaii, it is next-to-impossible to implement a Medical Savings Account, although there is some state legislative action possible. Bills HB 576, HB 1967, HB 2259, HB 2261, SB 204, SB 1817, SB 1818, and others designed to facilitate MSAs in Hawaii failed to pass last year, but remain alive and can be acted upon in the current legislative session.

When, if ever, will the American people realize that the finest medical care system on the planet is being dismembered and cut up slice by slice. Soon only the bones and memories will remain. Will Bill Clinton then say, "Let them eat soup!"

Richard R. Kelley is a graduate of Harvard Medical School. He practiced medicine in Hawaii for a decade before joining Outrigger Hotels & Resorts.

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Christmas Island Rescue: A True Story

**Brian J. Crisp MD, Major, Medical Corps
Department of Obstetrics and Gynecology
Tripler Army Medical Center, HI 96859-5000**

So there I was, innocently munching a hamburger and fries in the Tripler cafeteria, a relative rarity for a busy OB/GYN resident. I sat next to COL (Dr) Sam Heth, who was just finishing his lunch.

"Hey, did you hear about the mission to Christmas Island?" he asked.

"What mission?" I replied through a mouthful of fries.

"Well, apparently there's a 35 year old gal down there who's about 34 weeks pregnant who came in with vaginal bleeding. She had some spotting in the wee hours of the morning, but it's worsened and the doc down there needs some help. So he sent out a distress call to the Coast Guard who transferred the call to us. The command center may send someone down there." He collected his tray to leave.

"Well, if they need a resident to go along, let 'em know I volunteer."

"Will do. See ya!" he said as he left.

I polished off my burger and went back to clinic, not really thinking too much more about this conversation, and certainly not thinking that I might be off to this island—God only knows where it might be.

My first patient was for her initial OB appointment, a 246-pound lady with a lot of questions and a fair amount of risk factors for pregnancy. After the preliminaries, I told her to get undressed for the exam. I started the exam and my beeper went off—it was MAJ (Dr) Bruce Chen, one of staff our perinatologists. My nurse told me who it was and said it was urgent. I was in the middle of the exam, so I told her to put it on speakerphone.

He said, "I hear you're going with us to Christmas Island, is that right?"

"I'd certainly like to, but I don't know if it's official," I shouted back to the phone as I withdrew the speculum.

"Well, it's official—you're going, so hurry up. The plane takes off at 2:30 from Barber's point, so you'll have to move. You have your BDUs ("Battle Dress Uniform"—Army fatigues) and dog tags, don't you?"

"Sure do. I'll meet you upstairs in a few minutes" I said as I completed the pelvic exam.

"No," he responded, "You have to give Sam Heth a ride out there. His car is broken and he needs a lift. Find him and get going over to Barber's. You don't have a lot of time. Talk to [Dr] Linda [Brown] about covering your clinic." Linda was our chief resident. She inherited these kind of scheduling headaches. I wondered why she wasn't going. I figured she would have first pick at something like this—it sure sounded exciting to me.

I glanced at my watch. It was 1:20. "Crap," I muttered under my breath, just as my nurse brought my next patient back.

"Forget it, Aja, she's going to have to see someone else. I gotta go

catch a plane to Christmas Island—wherever that is. Some obstetric emergency. Talk to Dr Brown to see who can cover for me."

As I quickly tried to finish with my initial OB patient, my beeper became a hot potato as Dr Heth, the ER, and our Coast Guard point of contact all began calling almost simultaneously. I called home and left a message for my wife on our answering machine explaining that I was being sent to some island on an emergent medevac and that I didn't know exactly when I'd be back. (As it was her tennis night and I was expected to look after our two young children, it was OK to be sent; I wasn't so sure how it would go over if she found out I'd volunteered). I ran out of the office and into Dr Brown—"Hey Linda, did you hear about this Christmas Island thing?" I quickly explained the situation and ran out of the clinic, gratefully leaving her to sort out the shambles of my patient schedule. Only later did I learn that the reason Linda didn't go was that she was never issued dog tags.

I ran up the stairs to L&D, where I could change out of my scrubs and into my BDUs. At the top of the stairs, I literally almost ran into Drs Heth and Chen as they were wheeling a cart full of medical supplies to the elevator. These were to be delivered to the ER and thence by ambulance to Barber's Point NAS, where the Coast Guard aircraft were located. We—Tripler—had never been tasked for a mission such as this and it simply didn't fit into anyone's experience to pack for a potential Cesarean Section half an ocean away with no warning and an unknown amount of support on the other end. It was at this point that I learned that in addition to the OB guys (the three of us), we would also be supported by a staff Neonatologist MAJ (Dr) Wayne Hatch, an OB and Peds nurse, and a respiratory therapist. As we were unsure exactly how far along in gestation this patient was, we wanted to make sure we had all the personnel and equipment we might need not only for an emergent c-section but also for a neonatal resuscitation. It was at this point that I learned that Christmas Island, or Kiritimati, was an isolated island about 1700 miles due south of Oahu. Medical resources were reported to be minimal, and although commercial airliners could get there in 3 hours, our flight time in our Coast Guard Transport was about 5 hours. There were no Obstetricians on the island, and one seasoned Family Practitioner provided most of the medical care to the inhabitants of the island. One generalist alone on a tiny speck of an island in the middle of the Pacific—the guy's got a lot of guts, we all thought.

The three of us stood at the front desk of L&D and mentally checked off what we figured we'd need and what we had on the cart: C section pack, lots of different types of gloves, gowns, three quarter O.R. sheets, drapes, masks, iodine scrub and neonatal intubation and resuscitation equipment. Several units of O negative blood were packed on dry ice and waiting for us in the ER.

"What about anesthesia?" I asked.

"Well, hopefully all these preparations won't be necessary as we'll go down there, load the patient on the plane, and head back to Tripler," said Dr Heth. "Then, if we have to, we can do her section here. If we must do a section down there, I've brought some Lidocaine and we'll have to do it under local. Hopefully, that won't be necessary."

Youch, I thought. I'd never seen a section done under local before, and I didn't want to start now, but without any time left and without bringing a ton of anesthesia equipment down to Christmas, it seemed

like the most reasonable course of action.

Just then one of our nurse anesthetists strolled by and asked what all the commotion was about. After a quick brief, he asked what we were doing for anesthesia. "Local, huh?" he responded to my quick explanation. "Here, take this," he said as he tossed me a bottle of ketamine.

"How much of this do I use?" I asked as I stuffed the small bottle in my pocket.

"Oh, just titrate it until she gives you that thousand mile stare, then you know you're good to go. But it ought to take about 1-2 milligrams/kg." I recalled a mission to Africa that our Chief of Family Practice, COL (Dr) Michael Noce had taken in the recent past where ketamine was the major form of anesthesia. He had described all types of operative procedures that had been done with it, and it had worked great. Our anesthesia department was now complete.

We quickly ran the equipment to the ER where an ambulance was waiting to take it to Barber's. "You *do* know where the Coast Guard element is at Barber's, don't you?" asked the ER physician who was coordinating the transfer of equipment. He had also been ordered to give us a lift out there, but neither Dr Heth nor myself wanted to go in a stuffy bumpy ambulance. Air conditioning and padded seats go a long way in times like these.

"Sure, sure," replied Dr Heth, "Been there many times before. No problem." Dr Heth and I then trotted out the front door to my car to get our stuff at our respective homes and high tail it out to Barber's. As we exited the ocean side entrance to Tripler, he looked over at me and asked, "You know where it is, right?" "Well, I think so," I replied, "And if we have any trouble, we can always ask." Oh, God, I thought, I hope we don't miss this stupid plane driving around Barber's looking for the place.

After getting his stuff, we motored on over to my place in the Aliamanu Military Reservation housing area, all the while hoping not to run into my wife and having to explain all this. Thankfully, this was the kids' swimming lesson day, so they were out at the pool. We then took off for Barber's Point and were stopped at the gate as an ambulance, with lights and siren blaring, roared past us just as we were asking the gate guard instructions as to how to get to the Coast Guard portion of the base.

"Hey, that's our stuff!" exclaimed Dr Heth as the vehicle sped past. "I'll bet you ten bucks it is. Just follow them."

It was indeed our stuff. We arrived behind the emergency vehicle, parked and ran out to find Dr Chen who had the only cellular phone and was therefore the de facto leader of our little band. He informed us that the flight had been pushed back to 3:30.

Hurry up and wait. I thought that mode of thinking was out these days. Oh, well. After all the earlier rush rush rush, the mood now seemed strangely relaxed and unhurried. The "sense of urgency" we often talk about in obstetrics was now somewhat absent.

We watched as they loaded up the plane. It was a converted C-130, the type of plane used in airborne operations. It had been painted white with the red stripes of the Coast Guard, and outfitted for search and rescue. First to go on was a pallet of seats—our seats, as it turned out. Twenty-four somewhat shabby coach-type seats in all, it was loaded as a single unit via forklift. We had anticipated jump seats—these were much better. Next was another pallet with a patient bed and infant warmer. Finally, our stuff was loaded last and secured.

We boarded the aircraft and found seats. I sat in front so that I

could take advantage of the leg room. The crew chief gave us a quick briefing of the aircraft as well as what we could expect from Christmas Island. He told us it was a very under-developed airfield and island. Expect a bumpy landing and little to nothing in the way of luxuries. They'll probably take you to the hospital in a pickup truck so you can evaluate your patient. OK, got it.

We were soon on our way. After we had taken off and it was safe to move about the inside of the plane, I explored its capabilities. Where there had once been jump doors for paratroopers, there was now a floor to ceiling glass enclosure to aid in searches at sea. The front part of the cargo compartment was filled with rescue equipment—first aid kits, life jackets, inflatable rafts, and other miscellaneous equipment. As I gave myself a tour of the plane, I noted that Dr Heth was also exploring our newfound temporary home. Dr Chen was fast asleep in the back row of seats. Not unlike morning report, I thought. Since the trip was going to take a bit less than five hours, we had some time to kill. The crew chief was answering questions we asked, then asked if we wanted to "hook in" to the crew radio line and listen to their conversation. What else was there to do? We assented, and he gave Dr Heth and I headsets to listen in. Unfortunately, there were only two headsets available, so we shared them with the rest of the team as the flight commander drilled his subordinates on emergency procedures and we all listened to Credence Clearwater Revival's greatest hits in the background. The aircraft commander then called with an update on our patient. There was a rather strung out coconut relay to get info to us on the plane. We had to talk to the aircraft commander, who had to talk to the tower at Christmas Island, who had to talk with someone on the phone at the hospital, who spoke with the attending physician. Through this system, we found that our patient had a blood pressure of 122/72, a pulse of 120s, a fetal heart rate of 160s and that she was "hemorrhaging profusely."

We all looked at each other and spread the word throughout the group. It was clear that this was no longer going to be a "scoop and run" type of affair. By the sound of things, our patient was bleeding severely and starting to go into shock. We all huddled to collectively gather our thoughts again when the pilot was heard to curse over the headphones. We couldn't hear Credence anymore, and there was no further grilling of the lower ranks on emergency procedures. Something was up.

The crew chief walked quickly back from the cockpit. "Have everyone sit down," he shouted to me over the roar of the aircraft.

"Why?" I shouted back.

"There's something wrong with the plane."

"Everyone sit down," I repeated to my colleagues, "There's something wrong with the plane."

We took our seats and waited. The headset I had was passed to Dr Heth who spoke with the aircraft commander. What we learned was this: Part of the power system of the C-130 aircraft is a nickel cadmium battery located near the nose of the aircraft. During operating conditions, this battery can get hot. It has a heat sensor located on it to detect if the heat should become excessive, because if the battery gets too hot, it can spontaneously combust. If this happens, it can burn through the aluminum casing that holds it and fall out of the aircraft, plunging the battery, the plane, and us, to our doom. We had heard the pilot curse when he saw the little red warning light go on indicating the battery was too hot and may explode. It is one of those conditions where if the warning light

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INDICATIONS AND USAGE

BENZAMYCIN® Topical Gel is indicated for the topical treatment of acne vulgaris

CONTRAINDICATIONS

BENZAMYCIN® Topical Gel is contraindicated in those individuals who have shown hypersensitivity to any of its components

WARNINGS

Pseudomembranous colitis has been reported with nearly all antibacterial agents, including erythromycin, and may range in severity from mild to life-threatening. Therefore, it is important to consider this diagnosis in patients who present with diarrhea subsequent to the administration of antibacterial agents.

Treatment with antibacterial agents alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of "antibiotic-associated colitis."

After the diagnosis of pseudomembranous colitis has been established, therapeutic measures should be initiated. Mild cases of pseudomembranous colitis usually respond to drug discontinuation alone. In moderate to severe cases, consideration should be given to management with fluids and electrolytes, protein supplementation and treatment with an antibacterial drug clinically effective against *C. difficile* colitis.

PRECAUTIONS

General: For topical use only; not for ophthalmic use. Concomitant topical acne therapy should be used with caution because a possible cumulative irritancy effect may occur, especially with the use of peeling, desquamating or abrasive agents. If severe irritation develops, discontinue use and institute appropriate therapy.

The use of antibiotic agents may be associated with the overgrowth of nonsusceptible organisms including fungi. If this occurs, discontinue use and take appropriate measures.

Avoid contact with eyes and all mucous membranes.

Information for Patients: Patients using BENZAMYCIN® Topical Gel should receive the following information and instructions

1. This medication is to be used as directed by the physician. It is for external use only. Avoid contact with the eyes, nose, mouth, and all mucous membranes.

2. This medication should not be used for any disorder other than that for which it was prescribed.

3. Patients should not use any other topical acne preparation unless otherwise directed by physician.

4. Patients should report to their physician any signs of local adverse reactions.

5. BENZAMYCIN® Topical Gel may bleach hair or colored fabric.

6. Keep product refrigerated and discard after 3 months.

CARCINOGENESIS, MUTAGENESIS AND IMPAIRMENT OF FERTILITY

Data from a study using mice known to be highly susceptible to cancer suggests that benzoyl peroxide acts as a tumor promoter. The clinical significance of this is unknown.

No animal studies have been performed to evaluate the carcinogenic and mutagenic potential or effects on fertility of topical erythromycin. However, long-term (2-year) oral studies in rats with erythromycin ethylsuccinate and erythromycin base did not provide evidence of tumorigenicity. There was no apparent effect on male or female fertility in rats fed erythromycin (base) at levels up to 0.25% of diet.

Pregnancy, Teratogenic Effects, Pregnancy CATEGORY C: Animal reproduction studies have not been conducted with BENZAMYCIN® Topical Gel or benzoyl peroxide.

There was no evidence of teratogenicity or any other adverse effect on reproduction in female rats fed erythromycin base (up to 0.25% diet) prior to and during mating, during gestation and through weaning of two successive litters.

There are no well-controlled trials in pregnant women with BENZAMYCIN® Topical Gel. It also is not known whether

BENZAMYCIN® Topical Gel can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity.

BENZAMYCIN® Topical Gel should be given to a pregnant woman only if clearly needed.

Nursing Women: It is not known whether BENZAMYCIN® Topical Gel is excreted in human milk after topical application.

However, erythromycin is excreted in human milk following oral and parenteral erythromycin administration. Therefore, caution should be exercised when erythromycin is administered to a nursing woman.

Pediatric Use: Safety and effectiveness of this product in pediatric patients below the age of 12 have not been established.

ADVERSE REACTIONS

In controlled clinical trials, the total incidence of adverse reactions associated with the use of BENZAMYCIN® Topical Gel was approximately 3%. These were dryness and urticarial reaction.

The following additional local adverse reactions have been reported occasionally: irritation of the skin including peeling, itching, burning sensation, erythema, inflammation of the face, eyes and nose, and irritation of the eyes. Skin discoloration, oiliness and tenderness of the skin have also been reported.

DOSAGE AND ADMINISTRATION

BENZAMYCIN® Topical Gel should be applied twice daily, morning and evening, or as directed by a physician, to affected areas after the skin is thoroughly washed, rinsed with warm water and gently patted dry.

How Supplied and Compounding Directions:

Size (Net Weight)	NDC 0066-	Benzoyl Peroxide Gel	Active Erythromycin Powder (in Plastic Vial)	Ethyl Alcohol (70%) To Be Added
11.65 grams (as dispensed)	0510-05	10 grams	0.4 grams	1.5 mL
SAMPLE				
23.3 grams (as dispensed)	0510-23	20 grams	0.8 grams	3 mL
46.6 grams (as dispensed)	0510-46	40 grams	1.6 grams	6 mL

Prior to dispensing, tap vial until powder flows freely. Add indicated amount of ethyl alcohol (70%) to vial (to the mark) and immediately shake to completely dissolve erythromycin. Add this solution to gel and stir until homogeneous in appearance (1 to 1+ minutes). BENZAMYCIN® Topical Gel should then be stored under refrigeration. Do not freeze. Place a 3-month expiration date on the label.

NOTE: Prior to reconstitution, store at room temperature between 15° and 30°C (59° – 86°F).

After reconstitution, store under refrigeration between 2° and 8°C (35° – 46°F).

Do not freeze. Keep tightly closed. Keep out of the reach of children.

Caution: Federal (U.S.A.) law prohibits dispensing without prescription.

U.S. Patent Nos. 4,387,107 and 4,497,794

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indicating a hot battery comes on, the textbook answer is to land the plan immediately. We were fifteen minutes from half way to Christmas Island, and the textbook told us to turn around and head back to Hawaii.

"How sick is your patient down there, sir?" the pilot asked Dr Heth.

"Well," he said, "I can't be sure as we can't directly evaluate her. But it sounds like she's very sick and she might die."

Silence.

The pilot explained the problem with the battery, explaining that this may lead to an in flight fire and perhaps the necessity of ditching the aircraft at sea.

"Well," said Dr Heth, "If I had to ditch, I'd much rather ditch nearer to Honolulu than to Christmas Island. I can't make the decision for you, but you've got one life down there and about a dozen up here."

More silence. About 30 seconds later, we felt the plane banking steeply as it turned back towards Barber's Point. Our little team was crestfallen, but now we feared for our own safety.

One of our nurses, (CPT) Janet Goodart, leaned forward and told me, "Dr Crisp, I'm kind of scared."

"Oh c'mon," I replied, "I'm not going to be scared until they start handing out the life vests." As God is my witness, about 15 seconds later, the crew chief grabbed two life vests and took them up to the cockpit. Janet looked at me with that "well-are-you-scared-now?" look. We were all then supplied with high speed official Coast Guard approved life vests—well, almost all of us. There were seven of us, but after the crew got theirs, there were only five of the high tech life vests left. The last two folks in our group (Dr Chen was one of them) got what looked like leftovers from Wal Mart—big orange pouches with a self inflatable life vest equipped with a whistle. This is contrast to our vests which had radio transmitters with a radius of 60 miles, flashing lights, flare guns, dye for the water and signal mirrors.

We plodded on homeward, every minute expecting the nose of the aircraft to start on fire. We were taught how to use our radios and our flare guns, and Dr Chen figured out his whistle. We made plans to unload our equipment from this damaged aircraft and reload it onto another aircraft so we could quickly make an about-face to Christmas Island. As we approached Oahu, we were told that emergency vehicles would be surrounding the aircraft and we were handed flashlights so we could beat a hasty exit from the aircraft and not get run over by the fire trucks.

We landed without incident. The tail of the plane opened, the lights went out, and we all trooped out, our flashlights lighting the way. We assembled 100 meters off the tail end of the plane and watched as the fire trucks converged on the plane and fire fighters in heat reflective suits began inspecting its nose. We asked which of the other aircraft parked on the tarmac was the one that we were going to be taking back to Christmas Island, as we needed to get going now.

At about that moment an officer approached from the tower and informed us that the mission had been canceled. The patient had died about 30 minutes prior to our return to Oahu. As it happened, she would have died about fifteen minutes prior to our arrival on Christmas Island.

More silence.

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Common Sports Injuries Seen by the Primary Care Physician Part II: Lower Extremity

James F. Scoggin, III, MD*

Sports medicine is the science of caring for the medical and surgical needs of athletes and their injuries. Injuries of the upper extremity were dealt with in Part I in a previous article. Part II deals with injuries of the lower extremity.

Trochanteric bursitis and hamstring strains are treated with rest, rehabilitation, and correction of training errors.

Patellofemoral pain syndromes require accurate diagnosis and usually a rehabilitative program. Injuries to the medial collateral ligament are very common, but can be associated with tears of the meniscus and cruciate ligaments. The latter two often require surgical intervention.

Ankle sprains are graded by severity. The most severe can result in chronic pain or instability, but most respond well to functional bracing and progressive return to activity.

Trochanteric bursitis

This condition is seen most commonly in female runners with a wide pelvis. The patient characteristically complains of pain with running, or walking. The diagnosis is often made when there is pain present at the greater trochanter that is aggravated with resisted abduction of the hip. Initial treatment should consist of rest and ice to the greater trochanter region. If pain persists, a steroid injection into the bursa is considered, and a stretching program is usually instituted. In recalcitrant cases, a formal physical therapy program may be prescribed for modalities, such as ultrasound, stretching, and further exercise. Proper stretching and warm-up prior to exercise and sports can prevent recurrence.^{1,2}

Hamstring Strain

The hamstring group consists of three muscles: the biceps femoris, the semitendinosus, and the semimembranosus. These muscles span two joints, the hip and the knee, which predisposes them to

injury. The hamstrings flex the knee and extend the thigh. They are often injured with explosive bursts of speed as seen in soccer, football, track and field, and rugby. Poor warm-up, poor flexibility, and fatigue contribute to the probability of injury. In football and other team sports, hamstring injuries may occur either early in the game, when the athlete is not fully warmed up; or late in the game, when fatigue is a factor.

The diagnosis of hamstring strain is based on the history of pain in the posterior thigh following an explosive burst of speed, and physical findings of pain in the posterior thigh. There may sometimes be swelling and occasionally a palpable defect. The pain can usually be reproduced with flexion of the knee against resistance. The initial treatment on the sidelines is rest, ice, and compression. Crutches may be required in more severe cases or in the initial phases. The majority of these injuries resolve spontaneously with comfort measures only. Specific strengthening may begin when pain subsides. An elastic thigh support may aid in return to sports. Thorough warm up and stretching are keys for prevention. Hamstring strains rarely require surgical intervention unless there is avulsion of the hamstring origin near the proximal bone-tendon junction.^{1,3}

Runner's Knee, or Chondromalacia Patella

These terms are often used to describe pain in the front of the knee joint in running athletes. These are nonspecific diagnoses and really represent a constellation of causes of anterior knee pain involving the patellofemoral joint.

Involved athletes commonly complain of pain in the front of the knee, under the kneecap. The discomfort may occur with running, with climbing or descending stairs, or with sitting with a bent knee for a prolonged period of time.

On physical examination, one should note the overall alignment of the patient's leg. Factors which contribute to excessive pressure under the lateral patella should be noted. These factors may include lateral patellar tracking, a shallow patellar groove, relative weakness of the vastus medialis obliquus muscle, and a combination of relatively wide hips with genu valgum, or "knocked knees". The diagnosis is made following the usually characteristic presentation described above, especially if the pain can be reproduced with quadriceps contraction while compressing the patella.⁴⁻⁶

X-rays are often helpful. Always include a sunrise view, which can show lateral patellar tilt, joint space narrowing, osteophytes, or a shallow patellar groove. The mainstay of treatment is an exercise program. Straight leg raising exercises selectively build up the

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Fig 1.—Straight leg raising exercises build the vastus medialis muscle, which functions to stabilize the patella. These are often helpful for treating knee pain of patellofemoral origin.



vastus medialis muscle, which is a key component of patellar alignment (Figure 1). Short arc leg extensions, taking the knee through the last 20 degrees of extension, also selectively build up the vastus medialis obliquus. A Palumbo style knee brace may be used for return to sports participation.⁷

Physical therapy may be useful to assist with those patients who are refractory to a home exercise program, and to instruct in patella taping for sports participation. Referral to an orthopedic surgeon is indicated if the diagnosis is in doubt, or if there is no response to conservative measures.

Iliotibial Band Friction Syndrome

This condition commonly affects runners and cyclists. Characteristically, there is lateral knee pain where the iliotibial band rubs over a prominent lateral epicondyle of the femur just above the knee. The patient often complains of pain with activities while the knee is flexed. The knee may "creak" audibly. A diagnostic test may be performed with the knee flexed 90 degrees. The examiner should press on the lateral epicondyle of the femur. This becomes painful as the knee is gradually extended, especially at about 30 degrees. The treatment should include decreasing the training mileage and avoiding downhill running. Nonsteroidal anti-inflammatory drugs may be useful. If these measures do not give relief, the physician should consider a local corticosteroid injection. Other causes of lateral knee pain, such as a lateral meniscus tear, should be excluded.^{1,8}

Medial Collateral Ligament Sprains

Medial collateral ligament sprains are the most common knee injuries seen in surfers and in snow skiers. In surfers, the injury occurs with the bottom turn, particularly if the surfer loses his footing at that point. This injury is also very commonly seen in football and soccer players. The precipitating event is a valgus stress injury to the knee. The patient presents with a painful knee, and on physical exam the knee is noted to be tender medially. The pain is usually aggravated with valgus stress, and localizes to the medial collateral ligament. Medial collateral ligament sprains may be

Fig 2.—The Lachman's test is performed with the knee flexed 20 degrees. The tibia is pulled forward while the femur is stabilized. This tests for a torn anterior cruciate ligament.



graded as follows: Grade I is a mild sprain with no gross laxity. Grade II is a moderate sprain with some laxity noted; however, with a definite end point. A Grade III sprain demonstrates marked instability with no well defined end point. Meniscus tears and anterior cruciate ligament injuries are often associated with medial collateral ligament sprains, particularly grade II and grade III. The knee exam should therefore always include evaluation of the integrity of these structures.

The treatment for a mild medial collateral ligament tear initially is rest, ice, compression, and elevation. A hinged or lateral stabilizing brace may be used to protect the medial collateral ligament while still allowing range of motion. Progressive rehabilitation should then follow, as recovery progresses.^{9,10}

Torn Anterior Cruciate Ligament

The anterior cruciate ligament is the central stabilizing ligament of the knee. It prevents forward translation of the tibia relative to the femur. As previously mentioned, the anterior cruciate ligament may be injured in association with medial collateral ligament injuries or meniscus injuries. The "terrible triad of O'Donoghue," is the constellation of a torn medial collateral ligament, a torn medial meniscus, and a torn anterior cruciate ligament.¹¹

Anterior cruciate injuries may present to the physician's office during their acute phase, or following a chronic history. Acutely, the athlete may present with a history of the sudden onset of pain and giving out following deceleration and rapid change of direction. It may be part of the "clipping injury" in football. The athlete often feels or hears a "pop" at the time of the injury. This bit of history is highly significant, and should be specifically inquired about. The knee becomes painful, and usually swells rapidly.¹⁰

In chronic cases, there is usually a history of a previous injury. The athlete now complains of his knee frequently buckling or giving out. Pain and swelling are often associated with these injuries. Many patients have modified their activities to prevent these episodes. Some will have given up sports entirely.

On physical examination there is pain if the injury is acute. Often there is an effusion. This is usually bloody on aspiration, especially

Fig 3.—The anterior drawer test is conducted with the knee flexed while the proximal tibia is pulled forward relative to the femur. This tests for a torn anterior cruciate ligament.

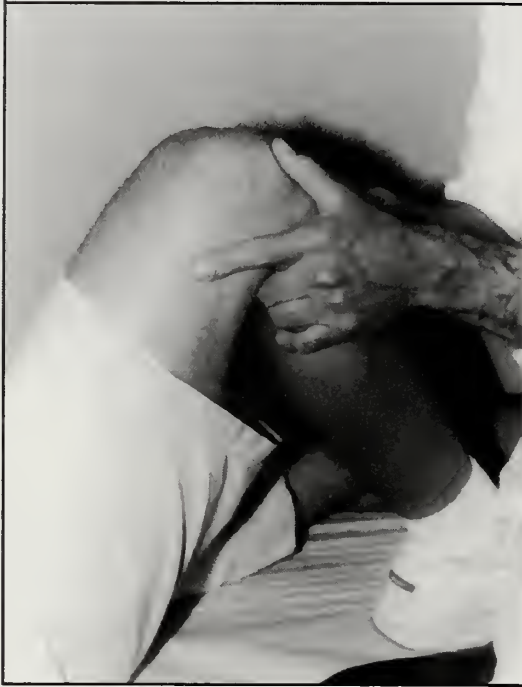


Fig 4.—The Apley's grind test is performed with the athlete in the prone position. Downward pressure and rotation are applied to the foot. This tests for a torn meniscus.



in the acute phase. The Lachman's test, the anterior drawer test, and the pivot shift test, all specifically evaluate the stability of the anterior cruciate ligament. The Lachman's test is performed with the knee in 20 degrees of flexion. The tibia is pulled forward while the femur is stabilized with the examiner's opposite hand (Figure 2). The anterior drawer test is conducted with the knee flexed 90 degrees. The examiner's thumbs are placed on the femoral condyles, and the proximal tibia is gripped and pulled forward relative to the femur (Figure 3). The pivot shift test may also be used to evaluate the degree of instability. All of these tests may be equivocal secondary to guarding, especially in the acute situation where the patient is painful and unable to fully cooperate.

In most cases of acute knee injury of sufficient magnitude to cause a knee effusion, an x-ray is indicated to rule-out associated fracture or avulsion of bone fragments. In most cases, the diagnosis can be determined by a thorough history and physical examination.¹² In cases where the diagnosis is unclear, an MRI may sometimes be indicated. In the case of the acute knee injury with a post traumatic effusion, or in the patient with a previous knee injury now experiencing pain, recurrent instability, or recurrent effusions, referral to an orthopedic surgeon is indicated. Early surgical reconstruction of the anterior cruciate ligament is usually recommended in young or active individuals. Occasionally, conservative management is indicated, particularly in older or sedentary individuals.¹³

Torn Meniscus

A torn meniscus should be suspected and looked for in major twisting, giving away, clipping, or other injury to the knee, especially if an effusion occurs initially. While the anterior cruciate

ligament tear is usually characterized by an immediate effusion, in the case of an isolated torn meniscus the effusion often appears more gradually and may take 24 hours to develop. Meniscus tears in young athletes often occur with significant trauma as described above, but in older individuals they may occur following simply day-to-day activities such as gardening or getting up from a crouching position. If the injury is chronic, the patient may experience pain at the joint line, effusions, a sensation of something "catching" in the knee, or a sensation of the knee "locking", or "sticking", in one position.

On physical examination one should check for a McMurray's "click." With the knee flexed 90 degrees, the lower leg is moved in a circular motion while the examiner listens or feels for a "clicking" or "clunking" sensation. An Apley's grind test is performed by having the patient lie in the prone position with the knee flexed 90 degrees. Downward pressure is applied to the foot in a grinding motion. This will often reproduce the patient's knee pain if a meniscus tear is present (Figure 4). The patient will often experience pain with a deep squat. An effusion may be present, and there is usually pain along the joint line.

As with most injuries of the knee, the diagnosis should be apparent after a history and physical examination is performed by an experienced examiner. If the diagnosis is unclear, one may consider an MRI. In most cases where a meniscus tear is suspected, referral to an orthopedic surgeon is indicated.^{1,14-16}

Shin Splints

Shin splints are characterized by pain occurring in the tibial region due to repetitive running or other overuse. This often occurs after an increase in training, such as when a recreational runner begins to

Fig 5.—A typical functional ankle brace.



prepare for a race or marathon and rapidly increases his or her mileage. The athlete typically presents with pain at the medial border of the tibia. Swelling is sometimes present, and pain on palpation is usually noted. An x-ray may demonstrate a periosteal reaction, particularly in chronic cases. Characteristic bone scan findings can help to differentiate shin splints from stress fracture of the tibia.

The cornerstone of treatment for shin splints is to decrease the patient's mileage to the level at which the patient was asymptomatic, and then resume training more gradually. Ice after training sessions should be used. The patient's foot should be examined, and an orthotic should be used if the patient has a pronating foot. The athlete should also wear well cushioned shoes and run on a softer running surface if possible. Heel cord stretching should be prescribed if the patient has tight heel cords, and nonsteroidal anti-inflammatory drugs are helpful symptomatically.¹⁷

Ankle Sprains

Ankle sprains are one of the most common sports injuries seen in the primary care practitioner's office. Ankle sprains may involve the medial (deltoid) ligament of the ankle, or the lateral ligaments of the ankle. Lateral ankle sprains are more common and occur with inversion injuries. Ankle sprains are the most common injuries seen in soccer. The diagnosis is made when the patient is noted to have pain and swelling of the ankle after a twisting injury. One should evaluate for associated fractures, neurovascular injuries, foot injuries, and torn tendons. An x-ray should be performed in all but the most mild sprains, especially if there is swelling, pain or ecchymosis.

Ankle sprains, like sprains of the medial collateral ligament, are graded. Grade I ankle sprains are histologically characterized by

microtears of the ligament fibers. On physical exam there is no instability of the joint, and there is usually minimal swelling and pain. Grade II ankle sprains are those in which ligament fibers are completely torn, but overall stability is intact. Pain, edema, and ecchymosis are present. Grade III sprains are the most severe, with complete tearing of ligament fibers, and gross instability. Marked swelling, ecchymosis, and severe pain are present. The diagnosis of the milder ankle sprain is rest, ice, compression, and elevation. Functional treatment with early mobilization and weight bearing in a protective brace are important (Figure 5). Return to activity following a grade I sprain may occur in as little as one to two weeks. After a grade II sprain, recovery may occur in two to six weeks. A grade III sprain, on the other hand, may require greater than six weeks of recovery time. Twenty to forty percent of athletes may have chronic pain after a grade III sprain. The reasons include incomplete rehabilitation, chronic instability, reflex sympathetic dystrophy, lateral impingement lesions, osteochondral lesions, and post traumatic arthritis. The patient with a suspected grade III ankle sprain, or with chronic pain following an ankle sprain, should be referred for further evaluation and possible treatment by an orthopedic surgeon.¹⁸⁻¹⁹

Summary

The injured athlete will often turn to his primary care physician for care of his injuries. A thorough history of the mechanism of injury and careful physical examination of the injured structures will usually lead to the diagnosis. Radiographic examination of the injured structures is often required to rule-out associated fractures or dislocations. While many sports injuries are appropriately treated in the primary care physician's office, others should be referred. Consultation should always be considered if the examiner is uncomfortable with the diagnosis or treatment of the injury at hand.

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10 Common Medicolegal Questions on HIV Infection

Todd T. Kubo MD, JD and SY Tan MD, JD

As the HIV pandemic continues, physicians will increasingly face both medical and legal questions when caring for these patients. Using a question and answer format, we provide in this paper, a guide to physicians in Hawaii on the medicolegal issues surrounding HIV infection.

Given the ongoing Human Immunodeficiency Virus (HIV) pandemic, practicing physicians have no choice but to confront both the medical and legal issues raised by this infection. A specialized body of law governs HIV infection and acquired immunodeficiency syndrome (AIDS); promulgated to protect patients from discrimination, breach of confidentiality, and invasion of privacy. Legal protection also assures HIV-positive health care providers that their rights will not be unduly abridged.

In November of 1994, the Centers For Disease Control (CDC) estimated that 17 million persons worldwide have already been infected with HIV and that approximately 6,000 more contract the disease daily. The CDC further estimated that by the year 2000, approximately 10 million children will have been orphaned because their parents have died of AIDS.¹ Many physicians worry that they will be infected by a patient, despite the low 0.2-0.3% risk of contraction following a needle stick from an HIV-positive patient. As of 1991, forty health care workers were thought to have acquired HIV from patients.²

In actuality, the physician is far more likely to contract hepatitis B. The estimated risk of this viral infection following a needle stick is in the range of 6-30%, and every year an estimated 12,000 health care workers become infected with hepatitis B, resulting annually in 250 deaths.³

Many physicians still avoid HIV-positive patients. Some may truly feel that they are not competent in this area, while others may use this rationale as an excuse for their fears and biases. Many HIV patients are IV drug abusers or homosexuals, but their need for professional medical attention and empathy is the same as that of the population at large.

The following discussion treats HIV-related medicolegal issues in a question-and-answer format. These issues can be broken down into three categories: those of physician choice, patient consent, and confidentiality. *Choice* questions ask whether or when a physician may refuse to treat an HIV patient. *Consent* issues include HIV testing without permission and whether the HIV-positive physician needs to disclose his own infection to patients so they can "consent" to being treated by the infected physician. *Confidentiality* issues address the limits of disclosure to other parties such as other physicians or health care institutions, schools, employers, health insurers, spouses, and other patient contacts.

Issues of Physician Choice

Question #1

(a) A patient wants you to be his physician. Can you decline if he refuses to disclose his HIV-status?

(b) An AIDS patient requires a routine procedure (such as a TAH-BSO, tonsilectomy, or bronchoscopy) which carries with it a risk of exposure to the health care provider. Can you, as his physician, refuse?

Answer

Whether a physician has a duty to treat a patient depends on whether a "doctor-patient" relationship has been established. Once a physician has initiated any type of "care" for a particular patient, a doctor-patient relationship is said to exist. This "care," however, usually does not include pre-employment physical exams or gratuitous advice ("curbside consults").⁴

What does the AMA have to say about the professional duty to treat HIV-positive patients? The current position of the AMA is as follows:

"It is unethical to deny treatment to HIV-infected individuals because they are HIV seropositive or because they are unwilling to undergo HIV testing, except in the instance where knowledge of the patient's HIV status is *vital* to the appropriate treatment of the patient. When a patient refuses to be tested after being informed of the physician's medical opinion, the physician may transfer the patient to a second physician who is willing to manage the patient's care in accordance with the patient's preferences about testing. (*italics added*).⁵

Thus physicians have an ethical duty to treat all HIV-positive patients. This current position of the AMA is a departure from their

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1980 Principles of Medical Ethics (Preamble section VI), which stated that: "A physician shall, in the provision of appropriate patient care, except in emergencies, be free to choose whom to serve..."⁶

This ethical duty, however, does not necessarily dictate a legal standard and a breach of professional ethics alone is not something for which a physician can be sued. On the other hand, although the AMA's advisories on ethical behavior are not law, the courts often look to these types of ethical standards to establish the requisite standard of care.

Suits against physicians may be based on the Federal Rehabilitation Act of 1973⁷ or the Americans With Disabilities Act of 1990 (ADA).⁸ Although these are federal statutes, many states, including Hawaii, have similar laws. Both federal and state laws protect handicapped individuals from discrimination unless that individual poses a "significant" risk to others and reasonable measures cannot be made to accommodate them. The Rehabilitation Act applies only to those programs that receive federal funding, while the ADA extends this protection to virtually all employers and public accommodations. HIV/AIDS patients fall under the protection of these acts, but because of the severity of the risk (death from AIDS), courts have sometimes found that AIDS patients can be considered a "significant" risk and thus excluded from protection.

Litigation results vary depending on the facts of the specific case. For instance, in Howe v. Hull, a 1994 case, a physician was found in violation of the ADA when he "referred" a patient away to another hospital across town reportedly because the latter was better equipped to handle that patient's particular condition. The court held that this transfer was pretextual and that the physician's refusal to treat was based on HIV discrimination.⁹ In contrast, in the 1993 case Toney v. U.S. Healthcare, a different federal court found a physician justified in his refusal to treat. The Toney court stated: "If others with the same handicap (HIV) do not suffer the discrimination, then the discrimination does not result solely by reason of the handicap".¹⁰ In other words, if not all HIV positive patients were refused treatment, then HIV could not have been the basis of the refusal.

In Hawaii, there has only been one case involving the "refusal to treat." In Doe v. Kahala Dental Group,¹¹ a dentist refused to treat a patient because of his refusal to disclose his HIV-status. The dentist informed the patient that based on the information requested, Kahala Dental Group might need to take different precautions as the proposed procedures involved exposure to his blood. The patient refused to provide the requested information and dental care was denied. The patient sued alleging handicap discrimination. The Hawaii Supreme Court agreed with Kahala Dental stating that "the prospective refusal of services was based, not upon appellant's having a handicap, but upon appellant's refusal to furnish information as to his physical condition." Thus, in Hawaii, inquiries about a patient's HIV-status are medically acceptable. Kahala Dental does not, however, stand for permissible refusal to treat a *known* HIV-positive patient.

Question 1(a) is the Kahala Dental case. The physician has yet to establish a doctor-patient relationship, so Hawaii case law suggests that he has no legal duty to the patient if the medical information regarding his HIV status is not forthcoming from the patient. Ethically, however, he is bound to serve as the patient's physician (because of the AMA standards...). Question 1(b) describes an established doctor-patient relationship and thus a duty to treat

imposed by the law. Since future application of the law is still unclear, at a minimum, a physician who decides to refuse to perform a requested procedure, must provide the patient with referral to another provider who will do the procedure and assume care of the patient else he will be liable for abandonment.

Issues of Consent

Informed consent is a prerequisite prior to any treatment or procedure. This section examines whether a physician's HIV-positive status constitutes a material risk that needs to be disclosed to a patient as part of proper informed consent. Also discussed are preemployment HIV screening, testing during pregnancy, and non-consensual HIV testing.

Question #2

A surgeon with AIDS is required by his employer hospital to disclose his HIV status to all of his patients prior to performing any procedures. Need he comply?

Answer

This situation is taken from an actual case in which the surgeon went along with the disclosure order and eventually suffered financial ruin (Behringer v. Medical Center at Princeton).¹² He subsequently filed a discrimination suit based on the ADA against the employer hospital. He lost the case because the court held that the severity of the risk, death from AIDS, necessitated the need for full disclosure as part of proper informed consent.¹³

Prior to 1990, there was no reported transmission of HIV from a health care provider to a patient. This changed when a Florida dentist, Dr David Acer, was found to have infected five of his patients. Public hysteria failed to produce legislation mandating HIV testing and disclosure for physicians. The AMA and the CDC, however, have made recommendations requiring both.

The AMA states: "[HIV-positive physicians] should either abstain from performing invasive procedures which pose an identifiable risk of transmission or *disclose their seropositive status* prior to performing a procedure and *proceed only if there is informed consent*."¹⁴ (Emphasis added)

The CDC requires that all health care providers adhere to strict universal precautions and suggests that an HIV-infected physician refrain from performing exposure prone procedures or seek counsel from a review panel. "If such panel feels that the infected health care provider be allowed to continue practicing, he should be *required to disclose his HIV-positivity* to all of his patients prior to performing any sort of invasive procedure on them thus obtaining *informed consent*".¹⁵ (Emphasis added)

Taken together, these directives from the AMA and the CDC and the case decision of Behringer stand for the following advice: The HIV-positive physician should refrain from performing any exposure-prone procedure. The only alternative is to inform the patient and obtain specific consent before proceeding.

Question #3

Can a hospital require an HIV screen as part of the application for staff privileges?

Answer

No. Mandatory HIV testing of physicians cannot be a condition for staff privileges, even for specialists who perform exposure-prone procedures. Even if screening were implemented, many unanswered questions would remain. Which physicians will need to be screened? At what intervals should screening be done? Who will pay for all the testing? These questions aside, mandatory testing of physicians could be considered an undue invasion of a constitutional right to privacy. As one AIDS expert has stated: "Screening without consent represents an invasion of human rights by undermining the person's autonomy and physical integrity... Required screening of health care professionals would indeed be ironic when programs for prisoners, immigrants, sex workers, and others at high risk have been already rejected."¹⁶

Question #4

You have sent your patient's blood to the lab to work up a fever of unknown origin. As an afterthought, you want to include an HIV screen. Can you?

Answer

Hawaii Revised Statute section 325-16 requires written consent from a patient prior to HIV testing. This informed consent is not the same as a general consent in that it must specifically state in writing that the consent given is for HIV testing. Exceptions to this rule include: (1) anatomical gifts; (2) research studies; (3) anonymous testing carried out at HIV test sites; (4) consent already obtained by a third party, e.g. an insurance carrier; (5) the patient is *unable to give consent* and his HIV status is necessary to make a diagnosis or determine a treatment plan; and (6) the patient is *unable to give consent* and there is reason to believe that the safety of a health care worker would be affected due to exposure to the patient's bodily fluids. Exceptions (5) and (6) are most relevant to the practicing physician. To trigger these exceptions, however, the patient must first be incapacitated and "unable to give consent."

Thus, in question 4 above, in order to include the HIV screen, you as a physician would first have to obtain written informed consent and give the pre-test counseling required by law. To add on the screen without the patient's specific consent would violate the law.

Question #5

Since AZT use during pregnancy decreases the possibility of infection of an unborn infant, can a pregnant woman be required to undergo mandatory testing for HIV?

Answer

No, or at least not yet. Even though lives may be saved by the prophylactic use of AZT in pregnancy, mandatory testing is generally held to violate the individual's right to privacy.

The proportion of women afflicted with HIV or AIDS continues to rise. In 1987, women represented only 4% of AIDS cases. Today, they make up nearly 20%.¹⁷ In 1994, approximately 8000 infants were born to HIV-infected mothers. Studies on antepartum AZT therapy have demonstrated a reduction of the 15-40% infant transmission rate.¹⁸ In addition to the reduction of infected infants, proponents of mandatory testing cite as a second benefit the increased caution physicians will exercise knowing that their patient is HIV-positive.

Whether the law will carve out an exception to the current privacy protection in the future remains to be seen. For now, CDC suggests that doctors counsel all pregnant women about the benefits of being tested for HIV. In a recent advisory, the AMA stated that all pregnant women should undergo mandatory HIV testing. By law, however, the states and the US government only require that all practitioners advise every pregnant woman of the value of testing for HIV and to ask each pregnant woman to consent to testing.

Issues of Confidentiality

Question #6

A dermatologist suspects that a patient's skin lesion may be associated with AIDS. He calls you, the primary care physician. Can you disclose to him the patient's HIV/AIDS status?

Answer

Yes. Physicians directly involved in a patient's care may disclose HIV status to one another, provided that the disclosure is pertinent to the patient's continuing care. H.R.S. 325-101 lists this as an exception to the strict confidentiality rule: "Release is made by the patient's health care provider to another health care provider for the purpose of continued care or treatment of the patient." Otherwise, the strict confidentiality rule states that: "The records of any person that indicate that a person has an HIV infection, ARC, or AIDS, which are held or maintained by any state agency, health care provider or facility, physician, laboratory, clinic, blood bank, third party payor, or any other agency, individual, or organization in the state shall be strictly confidential... (R)ecords shall be broadly construed to include all communication which identifies any individual who has HIV infection, ARC, or AIDS..."

Question #7

Your patient tests positive for HIV. Despite extensive counseling, he refuses to tell his wife. Moreover, he does not plan to take any precautions as she will become suspicious if he suddenly begins using condoms or abstaining from intercourse. Can you inform her?

Answer

One of the basic tenets of medicine is physician-patient confidentiality. The Hippocratic oath states that: "What I may see or hear in the course of the treatment or even outside of the treatment in regard to the life of men, which on no account one must spread abroad, I will keep to myself holding such things shameful to be spoken about." This tenet of confidentiality has been modified somewhat, and is held to be absolute unless "they infringe in a material way upon the safety of another person or persons."¹⁹

The landmark case of Tarasoff v. Regents of the University of California²⁰ in 1976 led to this modification. In Tarasoff, the defendant psychologist was found negligent for failing to warn a young woman whom his patient had threatened to kill. The patient eventually did stab her to death. The psychologist's defense was that he believed the psychotherapist-patient privilege prevented him from breaching confidentiality. The California court held that a patient's right to strict confidentiality was limited by the third party's right to personal safety, and that confidentiality must yield

to disclosure when a named person was placed in danger.²¹ Note that in *Tarasoff*, the duty to warn applies only when the harm is *foreseeable* and threatens a *specific*, or *readily identifiable* person.

Where there is a specific HIV-confidentiality statute, adherence to the wording of that statute is important. In Hawaii, H.R.S. Section 325-101 specifically mandates strict confidentiality of any records pertaining to a patient's AIDS status and provides for disclosure to third parties *only* via the Department of Health.

Thus, in Question 7, the physician's first step is to attempt to convince his patient to disclose to his spouse his HIV status. If the patient refuses, the physician may then notify the Department of Health. The patient should be informed that the Department of Health will be notified and that such identification is proper. According to H.R.S. Section 325-101, the Department of Health will then assume the task of contact notification. (Some states handle notification by special spousal notification groups.) The Hawaii State Department of Health's policy is to notify all contacts at risk *without* disclosure of the identity of the HIV patient.²²

The relevant statute in Hawaii, H.R.S. Section 325-101(4), gives the physician the *option* to report to the Department of Health the name of "the sexual or needle sharing contact of an HIV seropositive patient," in order for the contact to be notified. The statute goes on to state that: "[a]ny determination by a physician to disclose or withhold disclosure of an index patient's sexual contacts to the department of health... shall not be subject to penalties..."²³ Thus the statute seems to protect a physician from suit if he chooses not to inform the Department of Health of potential at-risk parties. The statute does not specifically give a physician the authority to directly notify the patient's spouse or other contacts that may be at risk.

Question #8

A patient is suing you for allowing his HIV-positivity to become known to the public. He states that someone in the billing department of his medical insurance carrier recognized his name and diagnosis. Are you liable?

Answer

What happens when a physician makes an insurance claim for reimbursement for services rendered to an HIV/AIDS patient? Is this a breach of confidentiality? According to Hawaii Revised Statute Section 325-101(a)(9), release of HIV/AIDS information to the patient's insurer is an exception to the otherwise absolute confidentiality rule, but "release shall not be made if, after being informed that a claim will be made to an insurer, the patient is afforded the opportunity to make the reimbursement directly and actually makes the reimbursement." One should therefore inform the patient that the diagnosis will appear in his insurance claim form and offer the patient the chance to make direct payment if he or she chooses not to have the diagnosis made known to the health insurer.

Question #9

You are contacted by the principal of your local elementary school. He is inquiring about the HIV status of one of his students who is rumored to have AIDS. He is worried about the safety of the other students. As the child's physician, can you disclose this information?

Answer

Hawaii's HIV-confidentiality statute forbids such disclosure. The American Academy of Pediatrics, the National Education Association, and the CDC have all advocated that children with control over their bodily functions should be allowed to attend school without interruption.²⁴ Social contacts in school settings are not considered "at risk." However, the risk status can change over the course of a patient's illness. If at some point in time the child begins to: (1) lack control of bodily secretions or excretions; (2) become prone to biting, spitting, or vomiting; or (3) develop open skin lesions, safeguards for the benefit of other students may then need to be implemented.

Question #10

You discover that one of your HIV-positive patients is working as an operating room technician. The patient refuses to inform his employer because he fears losing his job. Can you inform his employer?

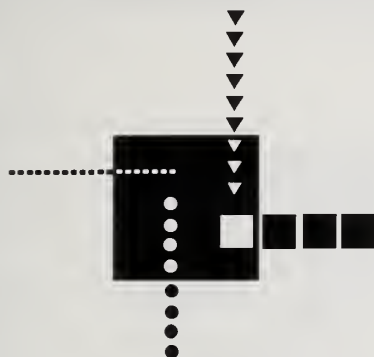
Answer

Breach of this patient's confidentiality in order to protect the surgical patients at the local hospital can be done only via the Department of Health. According to H.R.S. Section 325-101, the physician can release information to the Department of Health in order to inform contacts that the physician believes are at risk. This, of course, follows counseling and recommendation to the index patient to disclose and the patient's continued unwillingness to inform the contacts himself or consent to disclosure by the physician. Whether the employer hospital will be notified is left to the discretion of the Department of Health.

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In addition to these educational offerings, as an AMA-OMSS representative of your medical staff, you can participate in advocacy, policy-making and networking activities. **Our goal is to work with you to identify and address medicine's most pressing issues. We also want to help you increase your knowledge and skill so that together we can best serve the needs of patients, physicians, and the profession.**

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* The American Medical Association Organized Medical Staff Section (AMA-OMSS) leads and assists grassroots physicians, individually and in groups, to organize and reclaim their role as medical leaders and advocates for excellence in patient care, professionalism, and the integrity of the patient-physician relationship. We provide practical educational forums, focused policy development, and grassroots support through the Federation.

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Council Highlights

Friday, April 3, 1998
Roger Kimura, M.D., Secretary

The meeting was called to order by Dr L. Howard, President at 5:35 p.m.

Present: Drs L. Howard, President; P. Chinn, President-elect; J. Spangler, Immediate Past President; R. Kimura, Secretary; C. Kelley, J. Betwee, G. Caputy, H. K.W. Chinn, W. Dang, C. Goto, G. Goto, P. Hellreich, C. Kam, C. Kelley, R. Kienitz, P. Kim, A. Kunitomo, B. Leeloy, C. Lehman, J. McDonnell, G. McKenna, W. McKenzie, E. Montell, T. Oldfather, S. Saiki, M. Shirasu, M. Sia, S. Wallach, W. Young

Guests: Guy Sibilla, Esq. and Kathleen Foo, Certified Procedure Coder.

HMA Staff: J. Won, B. Kendro, N. Jones, H. Singh, J. Asato, A. Rogness-recording secretary.

Downcoding No-Fault Claims: Dr Howard introduced Attorney Guy Sibilla who has filed a lawsuit against a number of no-fault insurance companies who inappropriately downcoded no-fault insurance claims. HMA's role is to provide information on this issue and to facilitate the collection of the names of those interested to Mr. Sibilla. Physicians must contract individually with Mr. Sibilla if they wish to participate in the suit. The basis for the suit relates to the no-fault law which in general states that any disagreement regarding treatment or a claim must be submitted to the PRO for review. If that process is not followed and there is no challenge within 30 days, the claim is due and payable in full as submitted with interest. From January 1993 until December 1997, all but two of the companies writing no-fault insurance did not comply with the law and downcoded claims without a PRO review.

Dr Howard reported that in his next letter he will notify nonmembers that they will not receive further notification of important issues of this nature. He noted there must be benefits strictly for HMA members.

Membership Report: Dr Kimura reported that compared to a month ago, the number of active pay members are the same. Total membership increased by 40 members since last year. Handouts relating to dues collections to date and a delinquency list were distributed. Physicians who are delinquent will not be allowed to vote in the general election.

Treasurer's Report: Dr Kelley reviewed the December 1997 financial statement as well as the budget for Hawaii Medical Journal and the Annual Meeting. He also reviewed the February 1998 statements and report that the budget is on schedule and doing well.

President's Report: Dr Howard reported that he was pleased with the response he received from the neighbor island visits by the various county societies. In regards to the Supreme Court ruling on Informed Consent, he noted the ruling may have implications for many primary care physicians. HMA is planning a meeting to talk further about the ruling.

Congratulations to HMA Staff - Dr Howard recognized the following staff for their recent HMA anniversaries and faithful service - Mr. Jon Won (33 years), Becky Kendro (30 years) and J. Kawamoto (35 years). A round of applause was given and ice cream was served.

Component Society Reports

Honolulu.—Dr C. Goto, President reported that the April 21 HCMS membership meeting will feature a Mediterranean dinner and optional wine tasting. The June meeting will include voice dictation and the internet and the August meeting is scheduled at the Bishop Museum. The first mini-internship session of the year will be held on May 4 & 5.

Maui.—Dr J. Betwee, President reported that Maui has had two county society meetings since the last Council meeting. One was held for Dr Howard's visit and three new members were gained from that visit. The other meeting was a business meeting to get some projects started.

Kauai, West Hawaii and Hawaii have not held meetings.

For Action

Tobacco Task Force: The Tobacco Task Force Committee recommendation to send a letter opposing the McCain tobacco package to Senators Inouye and Akaka was approved

1998 HMA Annual Meeting: The HMA Annual Meeting and Arrangements Committee recommendations for exhibition booths fees and waiver of fees, speaker honorarium and registration fees were approved as recommended.

For Information

Legislative Committee: A legislative update on the bills HMA has been actively following was distributed as well as information on the partial birth abortion bill and worker's comp fee schedule. Drs S. Wallach and P. Chinn commended Heidi Singh for her outstanding work this legislative session as well as her ability to work well with a number of people on various health issues.

Sale of HMA Mailing Labels: A draft policy on the sale of mailing labels was presented and referred to the Executive Committee.

Long Range Planning Committee: A number of suggestions to the report have been made and will be presented at the June Council meeting.

HAMPAC: At the HAMPAC annual meeting, the following were elected: Dr McDonnell as Chair, Dr P. Hellreich as Vice-President and Dr P. Chinn as Secretary-Treasurer. Any HAMPAC member interested in serving on the HAMPAC Committee is invited to attend to the next meeting.

It was noted that HMA past president Dr Fred Holschuh is running for the State Senate and that a fund-raiser will be held on April 7. Physicians were encouraged to attend.

E & M Code Meeting: Dr Howard will be going to the AMAP meeting and volunteered to stay an extra day and attend the E & M Code meeting.

Scientific and Engineering Fair: Dr Lehman reported that on March 31 the fair for junior high and high school health and science projects was held. Drs R. Kimura, G. Caputy, C. Hara and C. Lehman helped judge the projects and awarded a scholarship of \$1,000 and cash prizes of \$100, \$75, \$50, and \$25.

State Medical Director: Dr Bairos noted the newspaper article regarding the resignation of another medical director of the prison. Concern was expressed regarding the prison health care system. HMA will continue to support a jail health care system based on national standards.

Cosmetic Surgery: Dr Caputy brought up the situation of the person who was recently arrested for doing cosmetic surgery without a license. He noted that the State of Hawaii rules on practicing medicine without a license are very weak and need improvement. This is being referred to the Legislative Committee for discussion.

The meeting was adjourned at 7:15 p.m.



Life in These Parts

Conference Notes

Approach to Patient with Dyspepsia

V.P. Philip Katz, Associate Professor of Medicine, Alleghany University of Health Science at Kam Auditorium on February 20, 1998.

Definition of Dyspepsia

- Epigastric discomfort with bloating; belching; nausea; flatulence; postprandial fullness
- Relationship to meals: variable

Types of Dyspepsia

- Indefinite cause
- Abnormalities of importance (H. Pylori gastritis, gastroparesis, duodenitis)
- No recognizable cause (functional dyspepsia) 60 - 70%

Epidemiology of Dyspepsia

- 1 to 2% of all outpatient visits
- 2 million annual office visits
- Annual incidence: 10% of patients
- Life time prevalence: 30% of patients
- **By any estimate, an expensive symptom*

Ddx of Dyspepsia

- Peptic ulcer
- GERD
- Biliary tract dis.
- Irritable bowel

- Chronic pancreatitis
- Gastric Ca
- Non-ulcerative peptic disease
- **Gastric Ca**
 - 1 to 2 % of dyspepsia
 - Ages 50-55
 - Family Hx
 - Oriental heritage
 - *Many symptoms: "Few gastric Ca's without many symptoms."*
- **Peptic Ulcer**
 - 20% of dyspepsia (may be higher if hx classic)
 - 80% = H. Pylori ⊕
 - NSAID's may exacerbate
 - Endoscopy if chronic
 - Recurrence common if H. Pylori not eradicated
- **GERD (2nd most common)**
 - Heart burn and dyspepsia
 - Usually non erosive: (Endoscopic neg)
 - *Clinical response to PPI or H2 helpful, but not diagnostic*
 - Prolonged PH monitor needed to confirm.
 - **PPI superior to H2*
- **Irritable Bowl**
 - Lower GI sy's predominate
 - Longer Hx (years)
 - Diagnosis of exclusion
 - May respond to analgesics (eg imipramine)
- **Biliary Colic**
 - Chronic Hx needed
 - Relief with surgery
 - Ultrasound may be false ⊕ if hx vague.
- **Non-Ulcer Dyspepsia**
 - Rule out others
 - Pathogens: Not likely; H. Pylori?
 - No good evidence of motility disorder
 - Acid not implicated
 - Visceral hypermotility
- **Approach to Dyspepsia**
 - H. Pylori eradication
 - Early endoscopy
 - Barium X-rays
 - Antisecretory therapy
 - Prokinetics
- **Warning Sx's**
 - Age over 55
 - Bleeding
 - Anemia
 - Wtg loss
 - Severe pain
 - Hx of ulcers
 - Obstructive sy's.
- **H. Pylori Eradication**
 - Pros: Offers cure; cheapest strategy
 - Cons: Antibiotic side effects; what happens when sy's recur?
- **Non-Ulcer Dyspepsia**
 - H. Pylori incidence same as asymptomatic population
 - ***H. Pylori Eradication:*
 - Treat only peptic ulcers
 - Not indicated in non-ulcer dyspepsia
 - Does not prevent gastric ulcers
 - No effect on GERD

****If eradication decided on:*

- Must prove H. Pylori present
 - Serology alone not effective screen
 - Rx: PPI plus 2 antibiotics for 2 weeks
 - Test for cause when symptoms recur (They recur in 80% of cases)
- re. Endoscopy:*
- Cost effective if less than \$450
 - Many sy's mandate
 - No way to increase value of reassurance
 - Only way to prove ulcer or cancer

"Heart Mate"

Richard Panui, 58, needed a heart in February; one was available so he got a "Heart mate" at St. Francis Medical Center. Cardiac Surgeon, **Carlos Moreno** was assisted by **Collin Dang** and **Jeff Lee**. Carlos' brother **Ricardo Moreno** who has done Heart mate surgery on the mainland attended as a consultant.

Donor hearts must come from within the state (because of the time factor). St. Francis Medical Center reports that 30% of heart transplant candidates die while waiting.

Doc Plays Doc

Kailua psychiatrist **Mark Stitham** who has been moonlighting for years on stage and TV finally got to play a doc. In a hit Japanese TV series "Hotel", Mark plays an ER physician who saves a young girl who fell into a pool.

(Eddie Sherman, Midweek)

Potpouri

A highway patrolman pulled over a carload of nuns.

"Sister," he asked the driver, "Why are you going so slow?"

"The sign said, the speed limit is 22, Officer," the nun explained.

"No, the speed limit is 65," he explained. "This is Highway 22."

The cop looked into the back seat and noticed that the other two nuns looked shaken and pale.

"What's the matter with them?"

"We just got off Highway 99."

Playboy's Party Jokes

When her pet poodle died, Mary nagged Ken for another dog. Ken wasn't a dog lover, but he dutifully searched pet shops for a replacement. All the dogs were expensive, except for a homely Karate dog.

"What's a Karate dog?" He asked the pet shop owner.

"Well, watch what he can do," the shop keeper commanded,

"Karate the dog biscuit!" The dog pulverized the biscuit.

"Karate that wooden box!" The box was smashed to smithereens. Ken was impressed. He took the dog home.

"Honey, I got you a Karate dog." He announced. Mary took one look at the homely creature and shouted, "Karate dog, my butt!"

A Roland Lichter favorite

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Yes, we have answers.

Health Benefits of Sex (Extracts from Reader's Digest Feb '98)

"Sexual activity is a form of physical exercise. During arousal and orgasm, there is myotonia. The more energetic the activity, the better."

"Cholesterol advantage: Sex may help tip the all important good cholesterol/bad cholesterol ratio in the good cholesterol direction."

Michael Cirigliano, assistant professor of medicine, University of Pennsylvania.

"Hormone jump: For men, any kind of physical exercise increases testosterone. For women, regular lovemaking increases the levels of estrogen which protect the heart and keep vaginal

tissues more supple. A steady sex life may also help ameliorate premenstrual syndrome."

Clinical psychologist Karen Donahey, director of the Sex and Marital Therapy program, Northwestern University.

"Amour—the ultimate analgesic: Arousal and orgasm can elevate the pain threshold. Sex can help relieve arthritic pain, whiplash pain and headache pain."

"Protects the prostate: Sex corrects the minor prostate problems in men in their late 40's by cleaning out their prostate fluids."

Beverly Whipple, associate professor at Rutgers, University College of Nursing.

Stress: "Sex can be a very effective way of reducing stress levels. A healthy sex life makes relationships more durable. Oxytocin secreted by the pituitary during contact may contribute to long term bondage between males and females in animals."

Karen Donahey

Miscellany

I sat next to the Duchess at sea

It was just as I feared it would be

Her rumblings abdominal

Were truly phenomenal

And everyone thought it was me.

(Assimov Laughs Again)

(Condensed article from Stitches Feb. '98)

Mix Up... Recently a patient was referred to a gynecologist. Sitting in the gynecologist's office, she found some literature explaining the medical names of various parts of the female anatomy.

She'd just learned that the outside of a female genitalis is termed *vulva*, when the nurse opened the door, looked at her and asked, "do you have a red Volvo?"

Naturally the patient was quite stunned by the question and she looked up and said, "Why?"

The nurse promptly replied, "Because if you do, you left your lights on."

Susan King MD. St. John's

Another Mix Up... A friendly 37-year-old gal came for a physical. She explained she'd fallen and hurt her back right after surgery for "Fryballs."

"Fryballs?" I asked.

"Yea, FRYBALLS" she replied and pointed to her pelvic region.

"Was it in your uterus?" I asked, as a light bulb went on in my head. After all she was premenopausal and nulliparous. "Fibroids!"

"Is that how you say it?"

After the exam, I wrote the name of her problem on a piece of paper just in case she needed to tell someone else in the future.

"It will save some time," I explained.

Bob Patton, Vancouver

Elected, Appointed & Honored

Scott Hundahl, oncologist and QMC chief of surgery was re-elected vice chairman of the National Commission on Cancer for 1998.

Linda Fox, former acting chief of the Child and Adolescent Mental Health Division, was appointed chief of the Mental Health Division of the State Health Dept.

Marion Hanlon, 77, retired pediatrician, was retiring again. Marion was acting administrator of Maui Memorial from 1990-1995 and medical director for the past nine years. Marion was honored at a retirement party.

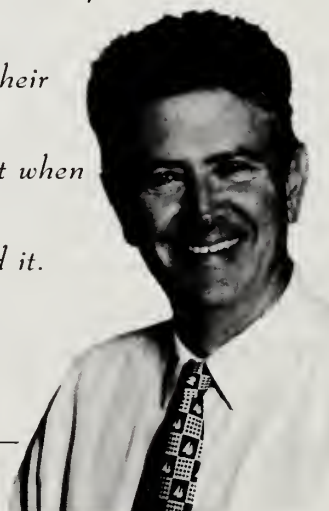
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To place a classified notice:

HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in HMJ as space is available.

Nonmembers.—Please call 536-7702 for a nonmember form. Rates are \$1.50 a word with a minimum of 20 words or \$30. Not commissionable. Payment must accompany written order.

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Office Space.—St. Francis Liliha Outpatient Building - New bldg. Space available to share. Call 487-9667.

Office Space.—Big Island - Kamuela. Lucy Henriques Medical Center, 1,000 sq. ft. medical office. Connected to North Hawaii Community Hospital. Call Thomas Davidson at 521-1317 or (800) 521-9157.

Office Space to Share.—Medical Arts Bldg, approx 1,000 sq. ft. Call 536-4992.

Office Space to Share.—Queens POB II. Call 597-8839, Fax 597-8509.

Office to Rent.—Aiea MD's office to rent. \$1600/mo for 700 sq ft SET FOR OB/GYNE-CALL 487-6411 PRACTICE INCLUDED IF PRIOR to June 1, 1998.

Misc.

Latex Glove Relief.—Free evaluation sample of gel reducing irritation from latex, nitrile and vinyl gloves. Limit 1 per Hawaii member's office. Call and record complete address or send business card to Sahara Cosmetics, ph 808-735-8081, P.O. Box 10869, Honolulu, HI 96816-0869 USA.

Announcement

Nurse Practitioner.—APRN Hawaii, nationally certified, 25 years experience RN, 10 years experience as NP adult and geriatric focus. Seeks collaborative practice on Oahu P/T, locum tenens OK. Available May 1998. Please reply to: NP, 2440 Campus Road, University #356, Honolulu, HI 96822, message (808) 951-8288. Excellent references.

New Location.—Orthopedic Center, Gerard H. Dericks Jr., MD, Medical Arts Bldg., 1010 S. King St., Ste. 503, Honolulu, HI 96814, Ph: 597-8839, Fax: 597-8509.

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For Sale.—Medical equipment. Super Sale. Microscope; Autoclave; Cryosurgery Unit; Colposcope (Zoomstar) with evacuator, retractor and speculum; refrigerators; Medasonic Fetalpulse Stethoscope. Call Thomas Davidson at 521-1317 or (800) 521-9157.

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No good deed should go unpunished.

How often do you check the expiration date on a free drug sample that you give to a patient? In New Jersey, an ophthalmologist gave a patient a sample vial of *Voltaren* which was outdated. The less-than-grateful patient notified the Board of Medical Examiners. Unbelievably, in response the Attorney General's office drafted an inspection order that allowed investigators to see, copy, and videotape the premises and all records, including appointment logs, licenses, job descriptions and equipment. The doctor refused to allow the inspection of any items not already in plain sight. The investigators conducted a search, and subsequently the attorney general filed an order to suspend the doctor's license for failing to comply with the inspection order and the Board fined the physician \$1000. The doctor has filed a suit against the state board, and the Medical Society of New Jersey has joined in the complaint.

Looked up the elevator shaft to see if the car was coming down - It was!

A cluster of ocular reactions to blood infusion occurred in the Pacific northwest in December 1997. The patients experienced conjunctival hemorrhage (100%), eye pain (62%), headache (25%), periorbital edema (23%), and lesser degrees of arthralgia, nausea, dyspnea and skin rash. After the initial report, similar events were reported in fourteen states around the country. Where data was available, it was found that 45 of 46 patients received at least one unit of blood filtered with the LeukoNet Prestorage Leukoreduction Filtration System of *HemaSure Inc.* of Marlborough, Massachusetts. A voluntary quarantine on seven other lots was invoked, and no additional adverse reactions have been reported.

You have to study a great deal to know a little.

The days of the perpetual student are numbered. In response to the pinch from government budget cuts, an increasing number of state universities have begun to penalize career under-graduates. Students who have accumulated enough credits to graduate are assessed a tuition surcharge sometimes amounting to out-of-state fees. The idea is simple - students who have completed enough credits to graduate should no longer be subsidized by taxpayers. It is still too soon to measure the effect, however the early signs are promising that these eternal students are moving into jobs or graduate programs, and only a handful have had to pay the surcharge.

Remember, one false step is never retrieved.

A woman working as a research lab technician at Emory University was moving a caged rhesus macaque monkey when an unspecified substance splashed in her eye. Because she was only moving the cage and not cleaning or feeding the animal, she was not wearing eye protection. She thought the event was a minor one, wiped her eye with a towel, and did not attempt to determine the precise origin of the substance. Ten days later she developed headache and eye infection, and was admitted to the Emory University Hospital. Initially, she responded well to antiviral medication, and her condition improved after 8 to 10 days. She was discharged from the hospital, but the following day her condition deteriorated. She became paralyzed, and died about six weeks after contracting the disease. Her disease was defined as herpes B, a rare disease in humans, but common in adult rhesus monkeys. Herpes B carries a 70% mortality rate in humans.

There are in fact two things, science and opinion; the former begets knowledge, the latter ignorance. (Hippocrates)

The Surgeon General of the United States was a vacant post for three years. Since Joycelyn Elders, MD dared to talk openly about masturbation and was forced to resign, the chair had been empty. President Clinton's next nominee, Henry Foster, MD, failed to obtain Senate confirmation because he admitted performing a few abortions, and thereby offended the right-to-life faction. Now we again have a Surgeon General as David Satcher, MD, was confirmed in a 63-35 vote after months of opposition by conservatives who objected to his views on AIDS and abortion. The role of Surgeon General has no precise definition or obligation, but offers an unlimited pulpit for preaching to the

public over all matters of health. Dr Satcher, formerly headed the Centers for Disease Control and Prevention, and he has promised to focus on teen pregnancy and discouraging the use of tobacco. Probably he will avoid discussions of health risks for White House interns.

Just a short while ago people thought semi-conductors were part time orchestra leaders, and microchips were very, very tiny snack foods.

Telemedicine is presenting a thorny problem in our electronic medical world. Twenty-one states now require full and unrestricted licensure if physicians perform any service or procedure described under the state's medical practice statute. The Federation of State Medical Boards (FSMB) crafted model legislation which would allow a doctor who holds an unrestricted medical license in one state to obtain a reciprocal license in another state when restricted to electronic consultations. Only California, Texas and Alabama have enacted telemedicine laws based on the FSMB model. There is notable opposition in many other medical organizations, including the AMA, based on a "genuine concern" for patient safety.

Informed consent is a cloudy pillow - uninformed consent is a hammer.

A patient developed a bunion on the great toe of her right foot. She went to her physician who examined her foot and told her that she had a bunion, but also had a problem with a metatarsal bone of the same foot. He informed her that he would attend to the bunion, but that he would not remedy the metatarsal problem. Subsequently, the patient recovered from the bunion surgery, but still had foot difficulties related to the metatarsal problem. Specifically, she was unable to wear high heel shoes. Her malpractice complaint centered around the surgeon's admission that he had not informed her that she would not have a normal foot even though his surgery was successful. The patient was awarded \$25,000, based upon the lack of informed consent.

There ought to be one day—just one—when there is open season on bureaucrats.

According to research by focus groups and polls conducted by the American Association of Retired Persons (AARP), members and other consumers want the following from Medicare: 1. A doctor who will take time and listen. 2. The ability to choose your own doctor. 3. The ability to go directly to the appropriate specialist without a gatekeeper or referral. 4. Prescription drug coverage. However, consider for a moment, are these not the primary things that everyone would want from a health plan, and are these not the very things that Congress has built into their own health plan, but tried to restrict in Medicare?

Hello Mexico, and adios, baby, to you.

Fourteen years of prohibition of alcohol ended in 1933 when the Democratic Congress repealed the Volstead Act, the 18th Amendment to the Constitution. Since that time the number one imported beer in America has been *Heineken* from the Netherlands. Nothing lasts forever, and now we are told by the beverage industry publication *Impact* that the Mexican beer *Corona* has taken over first place in the palates of those who desire imported suds. The college students and yuppies of generation X have developed Latin-American taste buds

Addenda—

- ❖ Kaiser-Permanente posted a loss of \$270 million for 1997.
- ❖ Despite advances in psychiatric therapy, suicide rates have remained the same for the past 25 years.
- ❖ The first car to offer seatbelts was the 1950 Nash Rambler.
- ❖ If you are six feet or taller, you are too tall to be an astronaut.

Aloha and keep the faith — rts ■

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June 24, Kaneohe	July 15, Kamuela
June 25, Honolulu	July 16, Hilo

Registration fee is \$50.00. Fee is waived for MIEC policyholders.

CONTINUING MEDICAL EDUCATION This activity has been planned and implemented in accordance with the Essentials and Standards of the Accreditation Council for Continuing Medical Education through the joint sponsorship of the Hawaii Consortium for Continuing Medical Education and Medical Insurance Exchange of California. The Hawaii Consortium for Continuing Medical Education is accredited by the ACCME to provide continuing medical education for physicians.

The Hawaii Consortium for Continuing Medical Education designates this educational activity for a maximum of 2.0 hours category 1 towards the AMA Physician's Recognition Award. Each physician should claim only those hours of credit that he/she actually spent in the educational activity.

SEMINARS FOR MEDICAL OFFICE STAFF

All office staff seminars are **FREE** for employees of MIEC policyholders and Hawaii Medical Association members.

A Quality Improvement Program That Protects a Medical Practice ■ Noon to 2:00 pm

June 25, Honolulu

Practical Ways to Keep Track of Patients ■ Noon to 2:00 pm

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July 14, Kona	

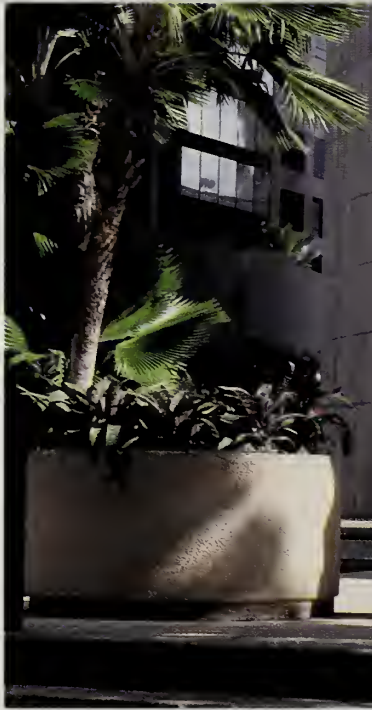


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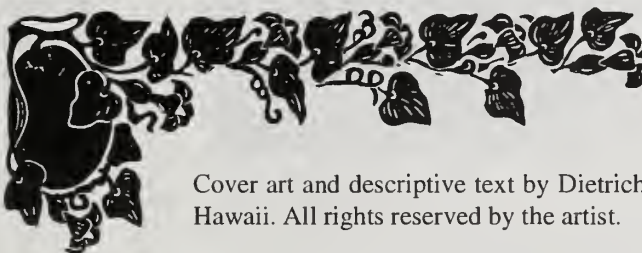
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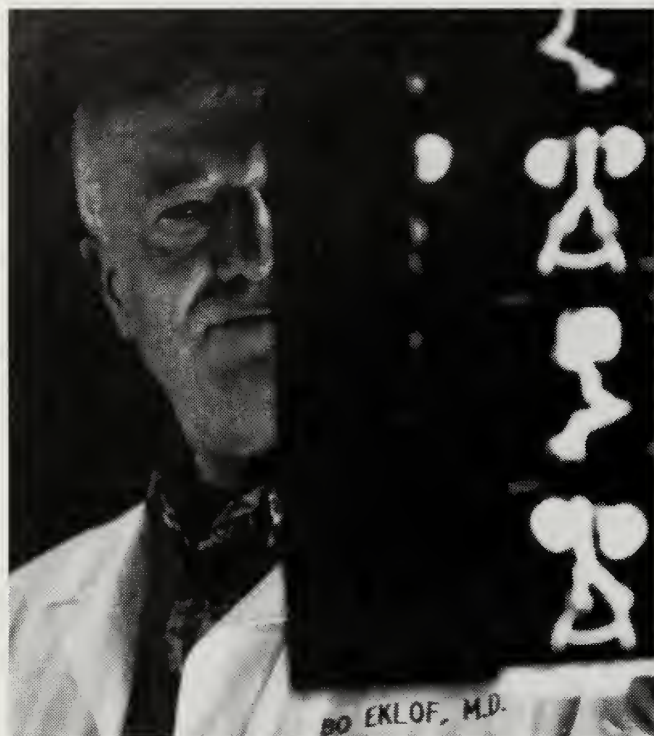
Ē Wa'a Ē

Depicting the Hawaiian canoe (wa'a) and related ceremonial as well as utilitarian functional paraphernalia.

A Call to Physician Authors

We are always looking for interesting scientific articles and we would like to hear from more of you. The *Hawaii Medical Journal* is a peer reviewed publication and covers a wide variety of topics. To submit a manuscript please call us for manuscript guidelines. Fax or call for your requests to: Hawaii Medical Journal, 1360 S. Beretania Street, Second Floor, Honolulu, Hawaii 96814, Phone (808) 536-7702 or Fax us at (808) 528-2376, e-mail: hma-assn@aloha.net.

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– Friday Noon Conference –
**Environment of Care Trends for
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of Issues Which Impact the
Environment of Care for Patients
and Employees**

*Kevin Matsukado, Rose Arpon,
Clayton Takara and Michelle Fisher*
June 19, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants will be able to:

- Describe specific environment of care issues that may impact daily practice.
- Understand and identify infection control, tuberculosis and bloodborne pathogens.
- Summarize radiation safety, hazard communications, fire safety, chemical spills, body mechanics and general safety.

– Friday Noon Conference –
Luncheon

**Update in Prostate Cancer
Screening**

Stephen K. B. Chinn, MD
July 17, 1998, 12:30 - 1:30 p.m.
Doctors Dining Room

Learning Objectives

At the conclusion, participants will be able to:

- Review of pros/cons of prostate cancer screening.
- Summarize results to date of prostate cancer screening.
- Describe new screening tests for prostate cancer.

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Governor's Blue-Ribbon Panel on Living and Dying with Dignity

Norman Goldstein MD, Editor

After a year-and-a-half of monthly meetings, the Governor's Blue-Ribbon Panel on Living and Dying with Dignity completed its report to the Governor on May 11, 1998. The Panel approved unanimously the following six recommendations.

1. That spiritual counseling be made more available to individuals who are afflicted with life-threatening illnesses by integrating those services more fully into the healthcare system.
2. That the public and healthcare professional education programs be designed and implemented to increase awareness of the choices available to the dying.
3. That the content of Advance Directives for Healthcare including living wills be made more specific, their use more widespread and their provisions more binding.
4. That hospice care be made more available and offered more expediently to the dying.
5. That effective pain management and other symptom control programs be required in all licensed healthcare institutions.
6. That involuntary euthanasia should continue to be a crime.

Because we in Hawaii live in a pluralistic society with many religious and cultural perspectives, it is important that no one perspective be allowed to impose its beliefs and mores on another. The Panel was not unanimous in its opinion on two major options to be presented to the Governor and our next Legislature:

- Physician-Assisted Suicide (PAS) - the physician provides the agent with which the patient ends his or her life.
- Physician-Assisted Death (PAD) - the physician actually participates in the administration of a lethal agent with the intent to cause the death of the patient.

With strict controls so that there will be no reasonable fear of a "slippery slope" down which patients may be pushed against their will, Doctor-Assisted Death with Dignity - DADD (my preferred term) would provide legal means for assisted death. As in Switzerland and the Netherlands, many voters who have chosen DADD do not in the end actually use their legal right, but they do have the choice. A ballot referendum in Hawaii would permit residents to cast their vote on this important issue.

The Gallup organization recently did a survey based on telephone interviews with 1,200 adult Americans,¹ and found that we:

- Support making it legal under a wide variety of specific circumstances - 33%
- Support making it legal in a few cases but oppose it in most circumstances - 31%
- Oppose making it legal for any reason - 31%
- Don't know or refused to answer - 3%

George Gallup, Jr. presented survey results:

- **The Clergy:** The survey is a wake-up call for the clergy. Not many see the clergy as capable of providing broad spiritual support.
- **The Family:** Throughout the study, the family emerged as a central source of comfort and support. This suggests a strong need, in turn, to support the family. Hospice care is one important means of supporting the family.
- **Young Adults:** The survey uncovers a strong need among younger people to understand what lies ahead. The level and breadth of the concern young people expressed about death calls for a response from those who care about and work with them.
- **The Medical Profession:** The study suggests that medical education should prepare physicians to engage the human, spiritual dimensions of the dying process as well as its clinical realities; and overall, to understand and integrate the spiritual beliefs that so often guide their patients.

The New England Journal of Medicine (the other peer-reviewed medical journal) published a special article on "a national survey of physician-assisted suicide and euthanasia in the United States."² Questionnaires were mailed to a stratified probability sample of 3,102 physicians in the ten specialties in which doctors are most likely to receive requests from patients for assistance with suicide or euthanasia. The authors received 1,902 replies (61%). They reported that about 6% of the physicians actually complied with their patients' requests at least once. The *New England Journal of Medicine* Survey results follow:

- 39% would write a prescription for a lethal dose of medication if legal
- 11% would write a prescription under current legal constraints
- 18% have received a request for assistance
- 3.3% have written a prescription for a lethal dose of medication
- 24% would give a lethal injection if legal
- 7% would give a lethal injection under current legal constraints
- 11% have received a request for a lethal injection
- 4.7% have given a lethal injection

On March 24, 1998, the *Honolulu Star-Bulletin* published the results of a telephone survey done for the newspaper and the NBC News 8 TV station between March 12 - 17, 1998. 419 registered voters statewide were asked the question, "Would you favor or oppose a law which would permit physician-assisted death under carefully controlled circumstances in Hawaii?"

- Favor 281 - 67.1%
- Oppose 82 - 19.6%
- No sure 56 - 13.4%
- Total 419 - 100%

The Hawaii Medical Association president, Leonard Howard, asked for a ballot of physicians in the February 1998 *Hawaii*

Continued on Next Page

Medical News. All that was required was one check mark and a signature.

- [] I support legislation preventing physician-assisted suicide
[] I support legislation legalizing physician-assisted suicide

Out of 1,900 ballots sent out, only 36 responded: 21 opposing and 15 in favor. Judging by the comments made to me in hospital halls, at medical meetings, and on the phone, physicians in Hawaii do have opinions on physician-assisted suicide—usually very firmly, but are reluctant to state their personal views for the record.

Thanks to Dr. Ann Catts for bringing the Gallup poll to my attention. Thanks also to the Blue-Ribbon Panel members, our diplomatic and tireless Chairman Hideto Konno, Marilyn Seely and her staff who kept us well-supplied with reams of documents, photocopies and references, and also kept our coffee cups full.

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1. Gallup, G.H. - "Spiritual Beliefs and the Dying Process: a Report in a National Survey," George H. Gallup International Institute, 1997.
2. Meier, D.E. et al - A National Survey of Physician-Assisted Suicide and Euthanasia in the United States, *N. Eng. Med.* 1998; 338: 1193-1201.

Father's Day Poem

Proud Father

I saw them standing there
It's been so many years—
Years of change and tears
Since I had seen them there.

Standing side by side,
Different postures each—
Those two I'd tried to teach
To stand tall side by side.

I'd longed to see them grin
As even now they did—
So little change since kids,
When I loved to see them grin.

Walking just ahead—
Both in blazers blue,
Clowning as they used to do—
Walking or jumping in bed.

I felt a father's pride
In two such handsome sons—
Collegiate work all done.
I felt a father's pride

As I saw them standing there.

Robert Swaim Flowers MD



Letters to the Editor

Aloha Dr Goldstein,

This is to thank you for your excellent and eloquent piece in Saturday's *Star Bulletin*.¹ It has been my observation that back during my nursing career I was expected to do to my patients things that might have gotten me arrested had I done them to another species of animal. Sad indeed that our patients are dying, tragic that they are forced to do so on the rack, shorn of their dignity and personalities.

I am appending a sonnet written by a family member on the occasion of his father's death due to intractable liver cancer—he chose to leave before the full horrors of hepatic illness descended on him—

Last Rites

"Now is the time," you said, as we three sat
Around your bed, the supper dishes done,
Your young, new wife, your sister and your son,
Just settled down for quiet evening chat.
"Now is the time," you said, making your great,
Last choice—ours to abet, yours to command—
The means beside you just as you had planned,
Resolved to die still managing your fate.
Mindful of Socrates, you took the draught,
The glass in your own hand, "Why so sad?"
You asked. "Sit close and let us all be glad
Together in our love." And so we laughed,
or tried to, holding hands until you slept.
Then we went to separate rooms and wept.

Name withheld at request of author, a registered nurse.

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1. Goldstein, N, Letting Go with Dignity Can be Our Finest Hour. *Honolulu Star-Bulletin*, 1998 (Feb 14), B2.

American Heart Association Marks 50 Years of Progress

American Heart Association

- | | |
|--------------|--|
| 1950s | AHA links smoking to heart disease |
| 1960s | AHA-funded scientists develop pacemaker, valve replacement surgery |
| 1970s | Educational campaign emphasizes heart attack warning signs |
| 1980s | Washington office opened to be nation's advocate on heart and stroke health issues |
| 1990s | AHA's long-term investment in research surpasses \$1 billion |



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Medical School Hotline

The John A Burns School of Medicine (JABSOM) Status Report on Finances and Contributions

Sherrel L. Hammar, M.D.
Interim Dean

1998 marks the 31st Anniversary of the University of Hawaii John A. Burns School of Medicine (JABSOM). Nearly every year, certain vocal segments of our community raise their clarions calls to partially or completely abolish the medical school. These groups fail to acknowledge how much this School contributes both to the health of Hawaii's people and to the economy of this state.

Students:

A vision of the late Governor John A. Burns made it possible for our diverse multi-cultural population of young people of Hawaii, from all socio-economic levels, to have an opportunity to achieve a professional education in Medicine. This medical school has been very successful in fulfilling this mission. Enrolled currently are 226 medical students, 271 post M.D. residents in training, 128 graduate students and 50 undergraduate students. The ethnic composition of each class represents the racial diversity of Hawaii. The first year class of 56 students is made up of 27 women and 29 men; 15 are Japanese, 9 Chinese, 7 Hawaiian, 6 Caucasian, 5 Filipino and 14 mixed ancestry. Forty-nine are Hawaii residents, two are from the mainland, four from Guam and one from Saipan. The majority of this class was selected from 1,228 applicants who graduated from some of the best mainland universities (42) and from UH Manoa (12). All have BA degrees, 8 have Masters degrees and 1 has a Ph.D. Many applied to JABSOM because of the Problem Based Learning Curriculum.

Currently there are over 1,500 JABSOM alumni. Nearly 60% of the physicians in Hawaii are either graduates of JABSOM, the UH Integrated Residency Programs or both.

Faculty:

The basic science faculty has been the hardest hit by retirements and resignations in recent years. In 1987-88, there were 70 full-time compensated faculty; presently there are 42 faculty. In the clinical departments there were 58 compensated full-time faculty in 1987-88. Currently there are 129 full-time compensated faculty. With the assistance of 1,139 volunteer faculty in

the basic science and clinical departments, instruction of medical students are maintained at a high level. The Medical School has attracted and retained outstanding academic physicians to the faculty. These faculty and the graduates of residency programs have helped to raise the quality of medical care in this State.

Finances:

The Liaison Committee on Medical Education recently granted the medical school full accreditation but expressed grave concerns about its financial stability, particularly related to funds provided by the State. JABSOM has the reputation of being the most underfunded and understaffed medical school of the 125 U.S. and Canadian

Continued on Page 541



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Do Hawaii Residents Support Physician-Assisted Death? A Comparison of Five Ethnic Groups

Kathryn L. Braun, DrPH*

Abstract

Surveyed were 250 adults in five ethnic groups—Caucasian, Chinese, Filipino, Hawaiian, and Japanese—on questions about physician-assisted death. When asked if there were any conditions under which physician-assisted death should be allowed, 52% said yes, 19% said perhaps, and 29% said no. Differences in response were seen, however, by ethnicity (with less support among Filipinos and Hawaiians), by religious affiliation (with less support among Catholics), and by educational attainment (with greater support among college graduates). Given the controversial nature of this topic, more public education and debate are needed. Meanwhile, physicians are urged to expand discussions with patients on their expectations about and options for end-of-life care.

Introduction

Several demographic and social trends are converging that make the issues surrounding death and dying very controversial. First, the population is aging, with life expectancy in Hawaii among the highest in the world: 76 for men and 82 for women.¹ Second, medical technology has advanced to the point of allowing us to greatly prolong life artificially, often at great cost and loss of life quality.² Third, the cost of health care continues to rise and various forms of health care rationing are being proposed.³ Finally, we see increased attention to human rights and self-determination, even in dying. Taken together, these issues are forcing us to become more aware of the various options available for end-of-life decision making and advanced planning. While many citizens are advocating for more protection of their “right to die,” perhaps an equal number of citizens are concerned about the establishment of policy to protect people from being coerced into refusing treatment or committing suicide.^{2,4}

Over the past few decades, a number of surveys on attitudes toward euthanasia have been conducted. For example, in a 1977 study, 65% of white respondents indicated support for legalizing physician-assisted death; this percentage rose to 71% in 1989.⁵

Since then, several states have taken the issue to their polling places and courts. The 1992 California Death with Dignity Act, a voter initiative to legalize physician-assisted death in that state, was defeated by voters by a 54% majority. However in 1994 and again in 1997, Oregon voters approved measures that would allow physicians to assist competent, terminally ill patients commit suicide. Meanwhile, court-upheld prohibitions on assisted death in Washington State and New York were sent to the Supreme Court, challenging the constitutionality of these prohibitions. The U.S. Supreme Court reviewed these cases together and, in June 1997, unanimously held that terminally ill people do not have a constitutional right to physician-assisted suicide. Specifically, the Court found that the New York and Washington state laws (that make it a crime for doctors to give life-ending drugs to mentally competent but terminally ill patients who no longer want to live) did not violate either the “due process clause” or the “equal protection rights” guaranteed under the 14th Amendment to the U.S. Constitution. The rulings in these cases, however, left room for continued debate and future policy initiatives at the state level.⁶

To help states that may want to develop guidelines for physician-assisted death, a nine-member panel of scholars from law, medicine, philosophy, and economics proposed a model statute for the regulation of legalized physician-assisted death.⁷ The model act suggests that physician-assisted death be allowed for individuals who are at least 18 years of age, who have “a terminal illness or an intractable and unbearable illness” (as verified by the primary and a consulting physician), and who are mentally competent to make decisions. Assurances are required that the patient fully understands his/her prognosis and treatment (including palliative care options), that he/she has the opportunity to consult a social worker about available services, and that he/she be advised to inform his/her family. There must be documentation from a psychiatrist or psychiatric social worker that the request is not a result of “undue influence” or “a distortion of the patient’s judgment due to clinical depression or any other mental illness.” The request must be witnessed by at least two adults (one of which is unrelated and has nothing to gain by the death), “repeated without self-contradiction on two separate occasions at least 14 days apart,” and recorded on paper, audiotape, or videotape.^{7, 26-29}

Despite what appears to be growing support of the legalization of physician-assisted death, it is important to note that this concept does not carry the same appeal in all ethnic groups. For example, a number of authors have found that the level of support among African Americans is much lower than among white Americans, by as much as 20%.^{5, 8-10} Given Hawaii’s multi-cultural population, is it

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safe to assume that different cultures have different outlooks on this issue? In previous research by the author, focus groups and key informant interviews were conducted to begin exploring differences among Hawaii's ethnic groups on death practices and end-of-life issues.¹¹⁻¹² Differences were seen among, and within, ethnic groups based on the respondent's religious beliefs, level of education, experience with artificial life prolongation in family members, and number of generations his/her family had been in the U.S. Focus group questions asked about euthanasia, but not physician-assisted death per se.

To assist Hawaii with its own debate of this issue, Governor Benjamin Cayetano established a Blue Ribbon Panel on Living and Dying with Dignity in February 1997. Its charge was to discuss issues related to death and dying, including physician-assisted death, and make recommendations for policy development. To inform the Governor's committee and future debate in Hawaii, this study built on the earlier, qualitative work to collect opinions from Hawaii residents about physician-assisted death and potential safeguards if this end-of-life option becomes legal.

Method

The study design called for surveys to be administered to 50 adults (25 older adults and, for each, an adult child) in each of five ethnic groups—Caucasian, Chinese, Filipino, Hawaiian, and Japanese—for a total sample of 250. Student interviewers were of the same ethnic background as the group they were assigned to interview except for the student assigned to interview the Hawaiian group; he was a young Caucasian born and raised on the Windward side. Interviewers first identified older adult participants through senior centers and religious organizations in neighborhoods with high proportions of the ethnic group, e.g., Japanese seniors were recruited through centers and temples in the Moliili area, Filipinos from Waipahu, Hawaiians from Waimanalo and Papakolea, etc. Participating seniors were then asked to identify an adult child willing to participate.

Ease of recruiting varied by group. Caucasian and Japanese participants were easily identified, although Caucasians preferred being interviewed in person while Japanese preferred to be interviewed by phone. The Filipino student interviewer lived in Waipahu and had no problem working through her family and neighborhood connections to recruit participants. Hawaiian and Chinese participants were harder to recruit; the two students interviewing these groups estimated that they asked four adults for each one who agreed. The Chinese group interviewer reported that the high refusal among Chinese was due to discomfort with the topic. The student interviewing Hawaiians reported high levels of distrust, which took time to overcome. In nine cases, a direct parent-child pair could not be interviewed, sometimes because the adult child did not have time to participate or lived out-of-state and did not respond to a mailed survey. In these cases, an effort was made to interview a niece, nephew, or adult grandchild of the older adult. Data collection was completed within 5 months and useable surveys were obtained from 125 seniors and 120 adult children.

The full survey instrument included 85 questions in four parts. Part 1 consisted of questions about age, gender, birthplace, educational attainment, marital status, living arrangements, number of children, religious affiliation, self-rated health, and experience with

life-threatening illness among family and close friends. In Part 2 participants were asked if they had any advance directives, such as a living will, and their reasons for completing them or not. Part 3 asked respondents how strongly they agreed or disagreed (5-point Likert scale) with statements about advance planning and decision making, e.g., it's bad luck to plan for death, a person should prepare by writing a living will, a person can trust family to make the right decisions, etc. The final section, Part 4, focused on physician-assisted death, starting by giving a definition. Then respondents were asked: Is there any condition under which physician-assisted death should be allowed? Possible responses were yes, perhaps, and no. If the participant answered no, questioning was concluded. If the participant answered yes or perhaps, another 18 questions were asked about possible conditions, e.g., should the requester be over 18? be mentally competent? have a terminal illness? be in pain? have a diagnosis for which physical or mental deterioration is expected? need a second opinion? need witnesses to the request? etc. Another 11 questions asked about conditions in which a request for physician-assisted death should not be honored, e.g., if the family disagreed, if the physician disagreed, etc. At the conclusion of the interview, the participant was thanked and offered a \$10 Longs Drug Store gift certificate. Data management and preliminary analysis were done in Epi-Info, a public-domain data management program produced by the Centers for Disease Control. Reported here are the bivariate analyses of responses related to physician-assisted death.

Findings

Demographics. The demographic characteristics of the sample are provided in Tables 1a (by ethnicity) and 1b (by generation). The differences found among the ethnicities and between generations were not surprising, e.g., the 125 seniors had a higher mean age than the 120 adult children (73 vs. 42 years) and a larger proportion of adult children had college degrees (29% of seniors vs. 65% of adult children). Among ethnicities, the Filipino group was most likely to be married (82% vs. 42-59% of other groups) and least likely to have experienced a life threatening illness themselves or within their families (30% vs. 67-94% of other groups). Only 30% of the Filipino group were college graduates, compared to 38% of Hawaiians, 45% of Japanese, 56% of Caucasians, and 60% of Chinese. As expected 90-98% of the Japanese and Hawaiian respondents were Hawaii-born, compared to 75% of Chinese, 30% of Filipino, and only 23% of Caucasian respondents. In terms of religious affiliation, 88% of Filipinos were Catholic, 59% of Japanese were Buddhists, and the majority of others were Protestant. It is interesting to note that a number of individuals claimed no religious affiliation—4% of Caucasians, 10% of Hawaiians, 14% of Japanese, and 27% of Chinese. While the selection of survey participants was non-random, ethnic distributions for religious affiliation, educational attainment, and birthplace within the sample are in line with state averages. The greater proportion of female than male respondents is also not surprising, as more females than males survive to old age and elders in our sample were more confident that their daughters, rather than their sons, would agree to the second family interview.

Physician-Assisted Death. When asked if there were any conditions under which physician-assisted death should be allowed, 52% of the 245 respondents said yes, 19% said perhaps, and 29% said no. Tables 2a and 2b display the responses to the question by ethnicity

Table 1a.—Demographic characteristics of the sample, by ethnicity (N=215)

	CA n=48	CH n=48	FI n=50	NH n=50	JA n=49	p- val
Mean age (yrs)	61	56	55	57	58	ns
% female	73%	58%	74%	66%	67%	ns
% married	58%	54%	82%	42%	59%	.04
% Hawaii-born	23%	75%	30%	98%	90%	.00
% college grad	56%	60%	30%	38%	45%	.00
% exp lifethreat	67%	74%	30%	94%	80%	.00
<u>Religion</u>						.00
Catholic	27%	13%	88%	26%	0	
Oth Christian	65%	54%	12%	64%	27%	
Buddhist	0	6%	0	0	59%	
None	4%	27%	0	10%	14%	

Table 1b.—Demographic characteristics of the sample, by generation (N=215)

	Seniors n=125	Adult Children n=120	p- value
Mean age (yrs)	73	42	.00
% female	62%	73%	ns
% married	55%	63%	ns
% Hawaii-born	58%	63%	ns
% college grad	29%	65%	.00
% exp lifethreat	65%	65%	ns
<u>Religion</u>			ns
Catholic	31%	31%	
Other Christian	49%	43%	
Buddhist	14%	13%	
None	6%	13%	

and generation, respectively. The responses varied significantly by ethnicity. Specifically, the Filipino and Hawaiian groups were less likely to say "yes" (26% and 46%, respectively) and more likely to say "no" (54% and 44%, respectively) than the other groups. The Japanese respondents were most supportive, with 71% saying "yes" and only 8% saying "no." About 60% of the Caucasian and Chinese groups said "yes" but about 20% of each of these groups also said "no." No significant differences were seen in responses by generation.

For Whom is Physician-Assisted Death Appropriate? As noted earlier, only individuals who answered "yes" or "perhaps" were asked for their opinions about the type of patients who should be permitted to request physician-assisted death and possible safeguards that should be required if physician-assisted death were legal in Hawaii. These included 38 of 48 (79%) of the Caucasians, 39 of 48 (82%) of the Chinese, 23 of 50 (46%) of the Filipinos, 27 of 50 (55%) of the Hawaiians, and 45 of 49 (91%) of the Japanese. By generation, 82 (66%) of the seniors and 90 (77%) of the adult children answered these further questions. To show the responses to the more detailed questions about physician-assisted death, Tables 3, 4, and 5 present two percentages: 1) those who answered "yes" as a percentage of those who were asked the question (first row of numbers) and 2) those who answered "yes" as a percentage of the total sample (second row of numbers).

For example, as shown in Table 3, very few of the respondents, regardless of ethnicity, believed that a person who was depressed should be allowed to pursue physician-assisted death. The Chinese group had a small, but significantly larger, proportion who approved of physician-assisted death for people with depression—21% of those Chinese who responded to the question, representing 17% of the entire Chinese sample. On the other hand, the majority of the Caucasian, Chinese, and Japanese groups felt that a person with a terminal illness accompanied by untreatable pain should be allowed to pursue physician-assisted death. For example, 90% of Chinese

Table 2a.—Are there conditions under which physician-assisted death should be permitted, by ethnicity?

	CA n=48	CH n=48	FI n=50	NH n=50	JA n=49	p- val
Yes	58%	65%	26%	46%	71%	.00
Perhaps	21%	17%	20%	10%	21%	
No	21%	18%	54%	44%	8%	

Table 2b.—Are there conditions under which physician-assisted death should be permitted, by generation?

	Seniors n=125	Adult Children n=120	p- val
Yes	49%	58%	ns
Perhaps	17%	18%	
No	34%	24%	

who answered the question (representing 73% of the entire sample of Chinese) felt that this person should be allowed to get help to die. While 78% of the Hawaiians who answered this question also agreed, that represented only 42% of the full Hawaiian sample (because only 27 of the 50 Hawaiians answered these questions). Small percentages of Filipinos agreed—35% of those who answered the question, representing 16% of the entire Filipino sample. Looking generally at Table 3, it appears that Filipinos and Hawaiians were less likely than the other three groups to agree that physician-assisted death should be allowed. In all groups, however, respondents were most likely to see physician-assisted death as appropriate

Table 3.—A should a person be allowed to get help to die in these conditions, by ethnicity? (% yes)						
	CA n=38 n=48	CH n=39 n=48	FI n=23 n=50	NH n=27 n=50	JA n=45 n=49	p- val
Term, pain						
-answerers	76%	90%	35%	78%	84%	.00
-full sample	60%	73%	16%	42%	77%	.00
Term, no pain						
-answerers	24%	33%	22%	19%	35%	ns
-full sample	19%	27%	10%	10%	32%	.02
Not Term, pain						
-answerers	63%	59%	22%	63%	51%	.02
-full sample	50%	48%	10%	34%	47%	.00
Phy dis, now						
-answerers	68%	67%	30%	41%	58%	.01
-full sample	54%	54%	14%	22%	53%	.00
Phy dis, now						
-answerers	42%	62%	26%	11%	44%	.00
-full sample	33%	50%	12%	6%	40%	.00
Ment dis, later						
-answerers	39%	62%	26%	19%	49%	.00
-full sample	31%	50%	12%	10%	45%	.00
Depression						
-answerers	3%	21%	0	0	11%	.02
-full sample	2%	17%	0	0	10%	.05

for individuals in pain and least likely to see it as appropriate for individuals with depression. Responses to these questions were also compared between seniors and adult children, revealing no significant differences (not shown in a table).

Who Should Agree with the Request? Tables 4a and 4b presents the answers to questions about who should agree with the person's request for physician-assisted death. Significant inter-ethnic differences are shown in Table 4a, with the Japanese group most interested, and the Hawaiian group least concerned with, having physicians and spouses agree with the decision. None of the groups were very concerned about having a psychiatrist agree (10-30%) or having their children agree (8-33%). Almost half of the Chinese also said that "no one" should have to agree with the patient's decision, i.e., that the patient's decision should be honored even if no one else agreed with it. Table 4b presents the answers to these questions by generation, revealing a number of significant differences. For example, the seniors were more likely than their adult children to want agreement from their physicians, spouses, and children.

Safeguards. Table 5 presents how the five ethnic groups responded to questions about assuring that a person requesting physician-assisted death understands all the options. In general, individuals who responded to this question believed that the patient should be at least 18 years old and mentally competent and that his/her wishes should be expressed repeatedly, in front of witness, and put in writing. About half of the answerers agreed that the person should be seen by a psychiatrist and about half of the Filipino, Hawaiian, and Japanese respondents felt that the person should be counseled by his/her minister as well. A third of respondents were supportive of having the person try anti-depressants and about half felt the

Table 4a.—Who should agree with the person's request for physician-assisted death, by ethnicity? (% yes)						
	CA n=38 n=48	CH n=39 n=48	FI n=23 n=50	NH n=27 n=50	JA n=45 n=49	p- val
Primary MD						
-answerers	63%	44%	43%	33%	77%	.00
-full sample	50%	36%	20%	18%	71%	.00
2nd MD						
-answerers	58%	51%	35%	44%	60%	.04
-full sample	46%	42%	16%	24%	55%	.00
Psychiatrist						
-answerers	24%	21%	22%	22%	33%	ns
-full sample	19%	17%	10%	12%	30%	ns
Spouse						
-answerers	47%	51%	48%	19%	58%	.02
-full sample	37%	41%	22%	10%	53%	.00
Children						
-answerers	32%	38%	39%	15%	36%	.03
-full sample	25%	31%	18%	8%	33%	.05
No one						
-answerers	37%	59%	35%	44%	36%	.00
-full sample	29%	48%	16%	24%	33%	.02

patient should try increasing pain medications before proceeding. (The Filipino group was least supportive of pharmaceutical interventions.) Small percentages in each group supported the idea of a waiting period. A common comment was "after you have the person do all those other things, a waiting period is unnecessary." There were no significant differences by generational group and so these data are not shown in a table.

Discussion

The data suggest that Hawaii's major ethnic groups have different responses to the legalization of physician-assisted death, with greater support seen among Chinese, Japanese, and Caucasian residents and less support seen among Filipino and Hawaiian residents. On first pass, it is interesting to note that the level of acceptance among groups is roughly related to the groups' life expectancies. Specifically, Chinese and Japanese in Hawaii have the longest life expectancy, while Hawaiians have the shortest.¹ On the other hand, the Filipino group, which is the third most longevous of the five groups, had a very low acceptance level, and this is most likely attributable to the high percentage of Filipinos who are Catholic. In fact, a separate analysis of religion and support of physician-assisted death showed that Catholics were more likely to say "no" while Buddhists and Protestants were more likely to say "yes" ($p<.001$). The "yes" group was also likely to have more years of schooling than the "no" group ($p<.001$). Unexpectedly, few differences were seen when the data were analyzed by generation, i.e., seniors vs. adult children. Future multivariate analysis of these data will examine the relative effects of ethnicity, religion, education, and experience with life-threatening illness in self and loved ones on attitudes toward physician-assisted death.

Also of interest are some of the details about who should be allowed to get help to die and what safeguards should be put in place.

Table 4b.—Who should agree with the person's request for physician-assisted death, by generation? (% yes)

	Seniors n=82 n=125	Adult Children n=90 n=120	p- val
Primary MD -answerers -full sample	70% 46%	42% 32%	.00 ns
2nd MD -answerers -full sample	65% 43%	40% 30%	.00 ns
Psychiatrist -answerers -full sample	27% 18%	23% 17%	ns ns
Spouse -answerers -full sample	58% 38%	36% 27%	.00 ns
Children -answerers -full sample	44% 29%	22% 17%	.01 ns
No one -answerers -full sample	42% 28%	43% 32%	ns ns

The largest proportions of respondents felt that physician-assisted death was acceptable for an individual with untreatable pain, especially if they also were terminally ill. This opinion is in line with the model statute described above.⁷ There was very little support for physician-assisted death for depression, which is in concurrence with the model statute and other pro-euthanasia documents that call for a psychiatric evaluation to rule-out depression in requesters.^{3,7} This issue is more controversial in the Netherlands where only 3% of patients who request help to die are referred for psychiatric evaluation and where cases in which individuals have been helped to die because they had "intractable depression" have been reported.¹³⁻¹⁴ It is gratifying, then, that almost 50% (range 32 to 63%) of respondents in the Honolulu study felt that a requester should consult with a psychiatrist and 34% (range 22 to 54%) felt that a requester should try anti-depressants before proceeding.

Methodologically, the study had several limitations. First, the sampling was not random. Participants were volunteers, recruited through formal organizations in Hawaii's various communities, and therefore were likely to differ from the general population. For example, that the older adults were participants in senior centers and religious organizations probably meant that they represented a healthy and socially active segment of the older adult population for whom these questions might be somewhat academic. Their children were also likely to be healthy. Participants self-selected to be interviewed, and it is suspected that those adults who were uncomfortable with the subject matter, unsure of their feelings about it, or distrustful of the survey process or the topic were likely to refuse. Also, the sample included no residents of the Jewish faith, in part because the Caucasian interviewer had more than enough volunteers before having a chance to recruit participants through Temple Emanu-El. Finally, interviewers reported that the ordering of questions may have created a bias toward answers that upheld an

Table 5.—How can we make sure this person understands all the options, by ethnicity? (% yes)

	CA n=38 n=48	CH n=39 n=48	FI n=23 n=50	NH n=27 n=50	JA n=45 n=49	p-val
At least 18 yo -answerers -full sample	63% 50%	51% 41%	78% 36%	62% 33%	66% 61%	ns .03
Competent -answerers -full sample	82% 65%	85% 69%	87% 40%	85% 46%	87% 80%	ns .00
Psychiatrist consult -answerers -full sample	32% 25%	56% 46%	43% 20%	63% 34%	51% 47%	.03 .04
Relig consult -answerers -full sample	34% 27%	38% 31%	52% 24%	52% 28%	58% 53%	ns .03
Inc pain meds -answerers -full sample	52% 41%	51% 41%	43% 20%	63% 34%	53% 49%	.01 .03
Anti-depress -answerers -full sample	34% 27%	28% 23%	22% 10%	54% 29%	40% 36%	.00 .04
Wish written -answerers -full sample	87% 69%	74% 60%	96% 44%	92% 50%	87% 80%	.05 .01
Wish witness -answerers -full sample	74% 59%	77% 63%	91% 42%	81% 44%	71% 65%	ns .05
Wish repeat -answerers -full sample	50% 40%	42% 34%	65% 30%	41% 22%	51% 47%	ns .04
Wait period -answerers -full sample	34% 27%	38% 31%	26% 12%	22% 12%	36% 33%	.00 .05

individual's right to free choice, rather than answers that reflected a greater concern for consumer protection. Thus, the survey results probably overestimate the acceptability of physician-assisted death in the state. A next step would be to estimate support of physician-assisted death in the general population through a random sample phone survey, perhaps through the Hawaii Health Survey or a separately-funded effort.

Despite limitations, the data suggest that different ethnic groups have different feelings about the acceptability of physician-assisted death. From the high turn-down rate, it is also expected that individuals in some groups have not even begun to think about physician-assisted death as an end-of-life option. The recommendation, then, is for more education and discussion about the issue, especially among the Filipino group in which opposition is high and among the Hawaiian and Chinese groups in which our sampling was most biased due to high refusal rates. Given that the Governor's Blue Ribbon Panel allowed itself a year to review the issues, it seems reasonable that the rest of the population will need time for education and discourse as well.

Regardless of how quickly Hawaii and other states move into the debate about physician-assisted death, individual physicians need to increase their efforts to discuss end-of-life options with their patients. Research suggests that outpatients want their doctors to initiate discussions about advance planning, and that these discussions should occur after their physician-patient relationship is established but while the patient is still well.¹⁵ Conversations should address values and expectations related to life and its artificial prolongation; knowledge and thoughts about palliative care options, such as hospice; and completion of living wills, documents that assign proxy, and code-status forms for hospitalized patients. There is empirical evidence to suggest that these discussions alone provide a "long-lasting sense of improved understanding and being cared for" among patients, as well as giving physicians vital information about their patients' treatment preference.^{15, 1066}

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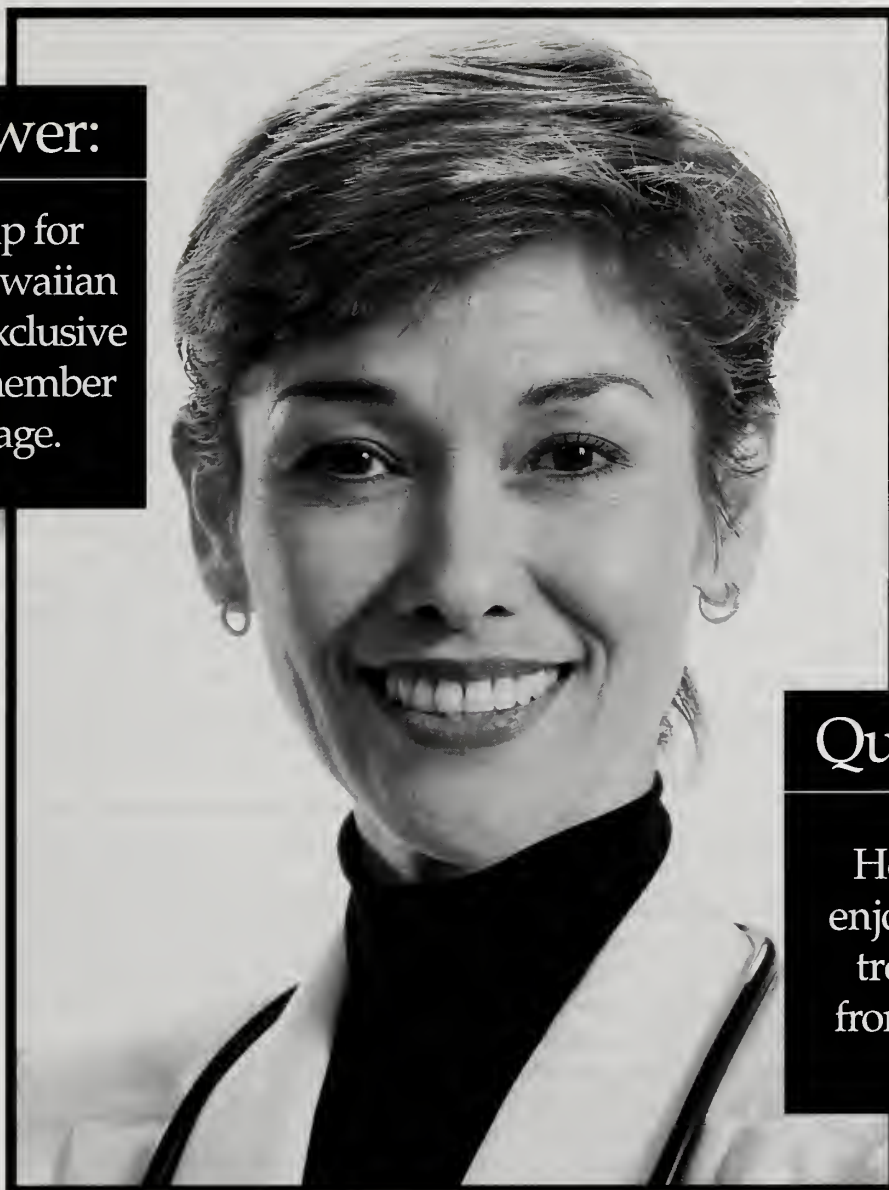
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A Quantitative Study of Environmental Asbestos Exposure in Honolulu

Hong-Yi Yang MD*, PhD, Judith Wishart MD, Yolanda Y.L. Yang PhD,
James Lumeng MD, Young K. Paik MD

The increased use of asbestos in various industries in past decades has led to increases in environmental asbestos pollution. Incidental exposure to asbestos is inevitable, and has generated public concern. We performed the following study aimed at determining the level of environmental asbestos exposure in Honolulu, and our results indicate that the levels of environmental asbestos in Honolulu are the lowest in the nation.

Introduction

Asbestos consists of a group of widely used fibrous silicates that are well known for causing adverse health effects to exposed occupational workers.¹⁻² Asbestos bodies are asbestos fibers coated with iron and protein, and are unique histologic markers for asbestos exposure. These "curious" bodies were first described in patients with asbestosis about 50 years ago.³ Since then, it has been well recognized that the asbestos body content in the lung is correlated with the degree of asbestos exposure and is considered a necessary finding in establishing the diagnosis of asbestos-related diseases.

The increased use of asbestos in consumer products and in construction materials in past decades has increased the chances of incidental, non-occupational exposure. Studies have confirmed that incidental exposure to asbestos dusts in the general population is also on the rise.⁴⁻⁵ The health effects of incidental asbestos exposure, particularly in regard to the risk for mesothelioma, is still unknown⁶ and has generated much public concern.⁷⁻⁸

In Honolulu, the naval shipyard at Pearl Harbor was the main source of local occupational asbestos exposure during the second world war⁹ when exposure control was not strictly regulated. In recent years, autopsies have been frequently requested to document

previous asbestos exposure of diseased workers. In order to determine the level of incidental, environmental asbestos exposure in our community and to establish a control background level of non-occupational asbestos exposure we sampled lung tissues of random autopsies from St. Francis Medical Center in Honolulu and quantified the asbestos bodies in these lung tissues. In this study, asbestos body counts from patients with known histories of occupational exposure to asbestos from Pearl Harbor naval shipyard are included for comparison.

Materials and Methods

Lung tissues from random autopsies from St. Francis Medical Center at Liliha, Honolulu were collected during a 10-year period from 1979 to 1988. The data obtained from each autopsy report included age, race, sex, occupational history, history of smoking, and presence or absence of asbestos related diseases. A total of 167 autopsies of patients without histories of occupational exposure to asbestos dusts and 18 cases of patients with known histories of occupational exposure to asbestos were analyzed. Of the 167 cases without occupational exposure to asbestos, 107 were male and 60 were female. Ages ranged from 15 to 93 with a mean age of 64. The ethnic backgrounds of these 167 cases were recorded as follows: 48 Caucasian, 40 Japanese, 31 Filipino, 18 Hawaiian, 15 Chinese, and 13 other or mixed race. Data from 18 patients with known histories of occupational exposure to asbestos were tabulated separately.

Extraction of Asbestos Bodies

Lung tissues were sampled from all 5 lobes. Approximately 10 gm. from each lobe was fixed in a 10% buffered formaldehyde solution. The lung tissue was minced, mixed, and pooled. Asbestos bodies were then extracted from 5 grams of the pooled lung tissue by Smith and Naylor's digestion method.¹⁰ Briefly, the sampled lung tissue was dissolved in a domestic laundry bleach (5.25% sodium hypochlorite). The digested tissue sediment was then washed with chloroform and ethanol to remove organic substances. Following centrifugation, the final sediment that contained asbestos bodies was filtered onto a 5 µm pore size Millipore filter. Asbestos bodies were counted directly under a light microscope.

Only morphologically typical asbestos bodies, i.e., those bodies with a characteristic central transparent fiber core and a golden-brown beaded or segmented iron-protein coat, were counted. Non-asbestos ferruginous bodies or "pseudoasbestos bodies" were carefully excluded from the counting. These non-asbestos ferruginous bodies appeared as aggregates of iron-protein particles without a transparent fiber core or with an irregular non-transparent core.¹¹

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Table 1.—The Asbestos Body Counts of Non-occupational Group (167 cases)

Asbestos Bodies per Gram of Lung Tissue	Number of Cases Percentage of Total
0	58 (34.7%)
1 - 5	79 (47.3%)
6 - 10	18 (10.7%)
11 - 20	4 (2.4%)
over 20	4 (2.4%)

Table 2.—Non-Occupational Cases with More Than 10 Asbestos Bodies per Gram of Lung Tissue

Age	Sex	Occupation	Asbestos Body Count
72	M	Fireman	18
49	M	Mortgage Co. Clerk	12
76	F	Housewife	60
72	M	Electrician	70
74	M	Mining Engineer	20
61	M	Security Guard	21
78	F	School Teacher	25
56	M	Police Officer	11

Diluted aliquots were used when the counts were unusually high and difficult to count.

Results

Environmental Exposure of Asbestos

1. Asbestos Body Counts in the Lungs

Asbestos bodies were found in 108 (64.6%) of the 167 cases without occupational history of asbestos exposure. In Table 1, the distribution of asbestos body counts in the group without occupational exposure to asbestos is shown. Fifty eight cases (34.7%) showed no detectable asbestos bodies in their lungs, 79 cases (47.3%) had 1 to 5 asbestos bodies, 18 cases (10.7%) had 6 to 10 asbestos bodies, 4 cases (2.4%) had 11 to 20 asbestos bodies, and 4 cases (2.4%) had more than 20 asbestos bodies per gram of lung tissue.

We were particularly interested in further characterizing the 8 cases with greater than 10 asbestos bodies per gram of lung tissue. In Table 2, their occupations, age, sex, history of smoking, cause of death, and asbestos body counts are listed. Six were males and 2 were females. Their occupations consisted of a fireman, a mortgage company clerk, an electrician, a mining engineer, a school teacher, a police officer, a security guard and a housewife. One person (the fireman) died of lung cancer, and another (the mining engineer) died of chronic obstructive pulmonary disease. None were diagnosed with asbestosis or mesothelioma.

2. Age and Sex Distribution

In Table 3, the age and sex distribution of the cases without occupational exposure to asbestos are listed. Asbestos bodies were

Table 3.—Age and Sex Distribution

Age	Number of Cases			Cases with Asbestos Bodies		
	Male	Female	Total	Male	Female	Total
under 40						
40	11	2	13	4	1	5
41 - 50	9	4	13	4	2	6
51 - 60	19	14	33	13	6	19
61 - 70	23	16	39	16	8	24
71 - 80	32	17	49	28	10	38
over 80	13	7	20	11	5	16
Total	107	60	167	76	32	108

Table 4.—Smokers and Non-smokers (non-occupational)

Smoking History	Sex:	# Cases	# Cases with A B*	% ±
Smokers:	Male	53	45	84.9
	Female	18	13	72.2
	Total:	71	58	81.7
Non-smokers:	Male	35	19	54.3
	Female	30	13	43.3
	Total:	65	32	49.2
Information not available:	Male	19	12	63.1
	Female	12	6	50.0
	Total:	31	18	58.1

*AB = asbestos bodies

Average number of asbestos bodies per gram of lung tissue

Smokers: = 4.5 asbestos bodies/gm.

Non-smokers: = 3.1 asbestos bodies/gm.

found in 76 (71%) of the 107 males and in 32 (53.3%) of the 60 females. Using the chi-square test, the difference between the males and the females is statistically significant ($p < 0.05$). In addition, there was an increased number of positive cases (defined as at least one asbestos body per gram of pooled lung tissue) in the older age groups. Below the age of 40, asbestos bodies were found in 5 out of 13 cases, a positive rate of 38%. The positive rate increased to 46% in the age range of 41 to 50, to 57% in the age range of 51 to 60, to 61.5% in the age range of 61 to 70, to 77.5% in the age range of 71 to 80, and to 80% in the group over the age of 80. The analysis failed to show significant differences based on ethnicity.

3. Smokers versus Non-Smokers

In Table 4, the differences of asbestos body counts between the smokers and non-smokers are listed. Of the 167 cases without occupational exposure to asbestos, 71 (53 males and 18 females) were cigarette smokers, 65 (35 males and 30 females) were non-smokers, and in 31 cases (19 males and 12 females) information on smoking was not available. Asbestos bodies were found in 58 (81.7%) of 71 smokers and 32 (49.2%) of 65 non-smokers demonstrating a statistically significant difference between smokers and

Table 5.—Patients with Known Occupational Asbestos Exposure

Case No.	Age	Asbestos Body Count*	Malignancy (cause of death)
1.	65	1200	Ca of the lung
2.	68	320	Mesothelioma
3.	45	125	Ca of the lung
4.	69	1200	Mesothelioma
5.	65	600	Ca of the larynx
6.	56	8060	Mesothelioma
7.	84	1000	Ca of the lung
8.	74	45	
9.	65	1000	Ca of the lung
10.	58	37	
11.	63	1050	Ca of stomach
12.	65	900	Ca of the lung
13.	63	120	
14.	80	100	Mesothelioma
15.	62	930	Ca of the lung
16.	66	116	Mesothelioma
17.	65	1575	
18.	54	390	Ca of the lung

*Per Gram of Lung Tissue.
All 18 patients were male

non-smokers (Chi-square test, $p < 0.05$). In addition, a greater number of asbestos bodies were detected in the lungs of smokers than non-smokers, as smokers had an average of 4.5 and non-smokers had an average 3.1 asbestos bodies per gram of lung tissue.

Occupational Group

Asbestos body counts and clinical data from the 18 patients with known histories of occupational exposure to asbestos are summarized in Table 5. The counts varied from 37 to 8060 per gram of lung tissue. In Figure 1, a graph of the total asbestos body counts from cases with and without histories of occupational exposure to asbestos is shown. An overlap is noted where two cases with histories of occupational exposure to asbestos had low counts of 37 and 41 asbestos bodies, and where two cases without histories of occupational exposure to asbestos (a housewife and an electrician) had high counts of 60 and 70 asbestos bodies per gram of lung tissue. The average overall count for the cases with occupational exposure was 1043 and for the cases without occupational exposure was 3.4 per gram of lung tissue.

Clinically, all 18 patients with histories of occupational exposure to asbestos had fibrotic pleural plaques, and 14 of the 18 had peribronchiolar fibrosis and a diagnosis of asbestosis. Five of the 18 patients died of mesothelioma and 7 of the 18 died of lung cancer. In contrast, of the 167 non-occupational cases, none died of mesothelioma, 4 died of lung cancer.

Discussion

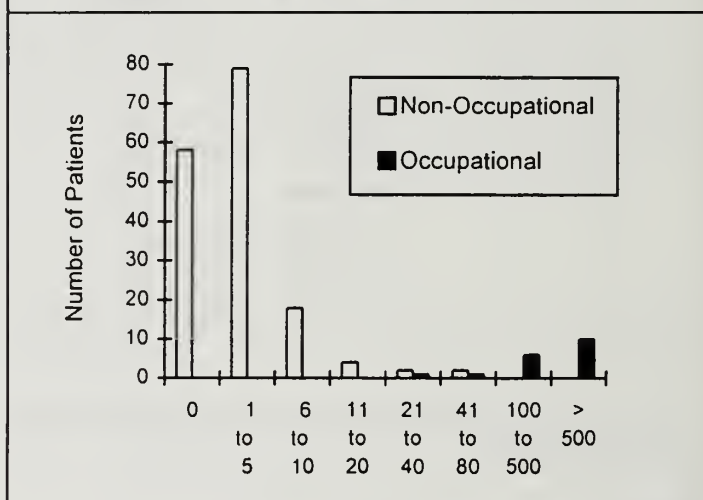
In this study the quantification and distribution of asbestos bodies in patients with histories of occupational exposure to asbestos are comparable to data reported by others.¹²⁻¹³ Two of 18 cases had less than 100 asbestos bodies per gram of lung tissue, and the remaining cases had asbestos body count up to 8060, with an overall average count of 1,043 asbestos bodies per gram of lung tissue. Fourteen of the 18 patients had malignancies, including 7 cases of lung cancer, 5 cases of mesothelioma, one case of adenocarcinoma of the

Table 6.—Comparison of Environmental Asbestos Exposure in US

Investigator	Location	# Cases	% (+)
Utidian et al*	Pittsburgh	100	97
Rosen et al*	N.Y. City	86	93
Breedin and Buss*	N. Carolina	100	93
Churg and Warnock*	Chicago	252	96
Bhagavan and Koss*	Baltimore	145	91.1
Yang et al.	Honolulu	167	64.6

*References (4, 12, 14, 15, 16)

Fig 1.—Asbestos Bodies Per Gram Lung Tissue



stomach and one case of squamous cell carcinoma of the larynx. The high incidence of malignancy may be due to high alert in connection with asbestos exposure as these cases were requested for autopsy to establish evidence of asbestos exposure for litigation and compensation purposes.

In the non-occupational group, asbestos bodies were found in 108 (64.6%) of the 167 cases. The detection rate of 64.6% is significantly lower than that of several other reported similar studies as seen in Table 6.^{4,12,14-16} In other studies using the same digestion method, asbestos bodies were detected in more than 90 % of the population from many different geographical areas in the United States and one study by Breedin and Buss included both urban and rural populations.

The results suggest that environmental (non-occupational) exposure to asbestos is extremely low in Honolulu. This may result from the relative isolation of Honolulu from industrial sources of asbestos, as well as from the effects of ocean air and trade winds in constant cleaning of the environment. Two persons from our non-occupational group, an electrician and a housewife, had relatively high asbestos body counts (70 and 60 asbestos bodies per gram of lung tissue respectively), which are nevertheless within the cut off point of 100 suggested for non-occupational exposure by Churg and Warnock.¹² The electrician actually belongs to the group of "secondary asbestos workers" who use asbestos-containing products in their

jobs,¹² and this may explain his relatively high asbestos body counts. The asbestos source of the housewife was not clear. Neither of these 2 persons was diagnosed with any asbestos-related diseases.

The results also showed a cumulative effect of age with a clear trend towards increased rate of detection of asbestos bodies with advancing age. The oldest age group had the highest positive rate at 80%. The difference of asbestos exposure between men and women in our series may be partly due to work-related secondary exposure and partly due to a higher incidence of the smoking habit in men than in women. In our study, more men than women were smokers, and the smoking habit was a significant factor in increased retention and the incidence of asbestos bodies in the lungs as shown in Table 4. Asbestos bodies were detected in 81.7% of the smokers and in 49.2% of the nonsmokers. Fifty three (74.6%) of the 71 smokers were male and 18 (25.3%) of the 71 were female. Smokers also had higher average counts of asbestos bodies in the lung (4.5 asbestos bodies/gm) than did nonsmokers (3.1/gm). In animal studies, cigarette smoking has been noted to impair the lung's ability to clear asbestos fibers,¹⁷ and smoking also facilitated the penetration of asbestos into the bronchiolar wall.¹⁸ This increased retention of asbestos among the smokers may contribute to the observed synergistic effects of smoking and asbestos in carcinogenesis.¹⁹

Although Honolulu is among the cleanest environments regarding incidental asbestos exposure, the public should still be reminded

that asbestos products such as popcorn ceilings, roof tiles and many electrothermal insulating materials are still present in and around the living environment. Many houses, apartments, and school buildings in the community built before the enforcement of regulatory legislation are possible sources of environmental asbestos exposure, and the resulting low dose exposure is not completely harmless. Emphasis must be placed on strict control measures for building demolition and for continued public awareness of careful handling of these existing asbestos-containing building materials.²⁰

Summary

Incidental environmental asbestos exposure is inevitable anywhere in the world and this problem has generated public concern. The present study demonstrates that environmental exposure to asbestos in Honolulu is among the lowest in the nation, as compared with many cities and even rural areas on the mainland United States. In addition, our results also demonstrate that there is a cumulative effect of asbestos in the lungs with advancing age, and that cigarette smoking increases the chance of retention of asbestos in the lungs.

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Life in These Parts Physician Moves

February: Internist *Diane Sakai* opened her office at Chinatown Cultural Plaza, 100 N. Beretania, Ste 201; and GP *Raymond Thompson* located at Ala Moana Blvd, 1441 Kapiolani Blvd, Ste. 1405.

March: Orthoped *Michael Wengler* started his practice at Queen's POB I, 1380 Lusitana St., Ste. 214.

Internist *Chew Mung Lum* retired effective Feb 28, and internist *Richard Lau Jr.* assumed the practice on March 1. Chew Mung thanked his patients, colleagues, hospital staffs and personnel for many years of gratifying practice.

Allergist *Jeffrey Kam* joined Straub King St. and Straub Pali Momi. Orthoped *Neil Thomas Katz* announced that he was moving to 302 California Ave., Ste 108, Wahiawa and to St. Francis West.

Hors de Combat I

Senate Bill 2583 adds new sections to the state insurance code to tighten regulation of mutual benefit societies such as HMSA and some smaller health insurance providers. The Senate bill requires these companies to act in good faith, provide accurate and complete information, take reasonable measures to prevent unfair and deceptive acts and practices and to render all services in a fair and equitable manner.

Mutual benefit societies are exempt from state, county and municipal tax, except unemployment compensation.

A Kailua-Kona couple wanted to know why HMSA paid only \$10,000 of the \$24,000 bill for an emergency appendectomy in May 1996.

Hilo pediatrician *Ruth Matsuura* testified that an insurance carrier called the surgical procedure for pectus excavatum in her 14-year-old patient as primarily cosmetic.

Hors de Combat II

The Hawaii Supreme Court ruled that doctors and dentists must make sure that a patient understands the risks of surgery, even if they are not performing the procedure. The justices reinstated a lawsuit by a woman who said her face appeared lopsided after jaw surgery recommended by her orthodontist. The case had been thrown out of Circuit Court.

Arlene Joaxson Meyers, Wahiawa pediatrician and 3rd year Law student who founded the non-profit Hawaii Coalition for Health says, the referring physician may have to make sure in writing that the patient has been informed of treatment risks. Arlene acknowledges that the ruling would lead to greater liability for physicians, but then that the patients will now get the necessary information to make a decision.

Medical Quotes

Melancholy is the pleasure of being sad.

Victor Hugo

There are only two sorts of doctors; those who practice with their brains, and those who practice with their tongues.

William Osler

We have not lost faith, but we have transferred it from God to the medical profession.

George Bernard Shaw

The door that is not opened for a beggar will open for a doctor.

Talmud

Specialist: A man who knows more and more about less and less.

William Mayo/Nicholas Murray Butler

The greatest discoveries of surgery are anesthesia, asepsis and roentgenology—and none was discovered by a surgeon.

Martin Henry Fisher

One of the first duties of a physician is to educate the masses not to take medicine.

William Osler

Artificial insemination: copulation without representation.

Playboy

A physician who treats himself has a fool for a patient.

William Osler

I am dying with the help of too many physicians.

Alexander the Great

Doctors pour drugs of which they know little, to cure diseases of which they know less, into human being of whom they know nothing.

Voltaire

Dr. Hoops

Gleaned from MidWeek, April 1, 1998

Modest *Mark Mugiishi* has led the Iolani varsity basketball team to 2 state titles and 3 ILH championships in 5 years and was recently named Coach of the Year.

Mark claims he was never a great athlete i.e. he was on the Iolani golf team and on the intermediate basketball team. But then, he was class valedictorian, a Presidential Scholar and a National Merit Scholar. He went to Northwestern where he finished a bachelors and MD degree in 6 years. During a semester off between medical school and residency, he found that Iolani needed someone to teach 8th grade science. Iolani also needed a coach for the girls intermediate basketball. He was boys JV coach as well. When he finished residency, and started private practice, both the headmaster and athletic director asked him to be boys varsity coach. Mark says:

"Not bad for a guy who did not play ball for the Red Raiders. But sometimes if you're junk, you study the game and you understand it. It helps in teaching the game. If you're not a natural, you can

break it down and help the kids understand what they should do."

During a game, Mark is the calm at the center of the storm. "People tell me that I don't bark as much as most coaches. In the heat of the moment, chewing the kids doesn't help. I think the time to do that is in practice. Come game time it's their show. I try to give them guidance and not bark too much."

Medical Tid Bits

"Case Studies in GERD Management: The Era of the PPI"

Anthony Morrealia Pharm D, (Sponsored by Astra Merck)

re Gerd: PPI's work the best, but symptoms recur when Rx stopped:

H2 Blockers: 50% reduction of sy's.

PPI's: 90% reduction of sy's.

VA Study: Prilosec 20 preferred over Prevacid 30 and more cost effective.

All H2 blockers are the same.

Gerd Therapy: PPI's better than fundal plication.

"Newer Therapeutic Approaches in Cardiovascular Disease" Cardiologist Stanley Kawanishi MD

re Cardiac Surgery:

a. Minimally Invasive By Pass: Danger of bleeding 1-2 days postop; Note: heart still pumping during the procedure.

b. Laser Technique: Punches fine holes into cardiac muscles; a niche procedure.

c. Batista Procedure: a niche procedure; resection of dilated portion; 50% mortality 2' to arrhythmia

re JNC 6 (prevailing theme)

Hypertension with comorbid conditions need more aggressive therapy.

Miscellany

Mac and Todd, two brothers went together to an employment agency for work. Mac was called first for an interview. "It says here you're a pilot," said the employment counselor. Mac nodded. "Well, that's great. They need experienced pilots. I have a job for you immediately." With that, Mac left for the airfield.

Todd's interview didn't go as well. When asked about his work experience, he replied, "I'm a tree cutter." The counselor said there were no openings for tree cutters. Incensed, Todd demanded, "How come you have a job for my brother and not for me?"

"Because your brother is a pilot," explained the counselor. "He has a specialized skill."

"What do you mean specialized? I cut the wood and he piles it!"

(Gleaned from Readers Digest Feb '96)

schools.

The annual budget for the School of Medicine is approximately \$54 million. About \$16 million are from State General Funds. Twenty-three million dollars are derived from research and training grants and an additional \$15 million are generated by medical school faculty from not-for-profit research institutes in local community hospitals and medical centers. The total external funding amounts to \$38 million per year.

In addition, through contracts and its collaborative relationships with the community teaching hospitals and Hawaii's health care industry, the medical school receives about \$35 million. This is a mutually beneficial relationship in which the medical community gains from the presence of the medical school and the bedside training of medical students and 14 post M.D. residency and fellowship training programs. Every dollar spent by the State on the School of Medicine attracts \$2.50 of external funding and an additional \$2.50 in community support.

In an effort to assist with support of the medical school, student tuition will continue to increase. Presently, resident tuition is \$11,000/year. Non-resident tuition is \$24,000. Although these amounts are about average or slightly lower than many state schools, medical students do not have the time to accept employment. Students must rely on scholarships, student loans, and financial aid.

Community and Outreach Activities:

In 1997, JABSOM completed the Pacific Basin Medical Officers Training Program which was located in Pohnpei, Federated States of Micronesia. Seventy-one graduated as medical officers and have been placed for service throughout Micronesia and American Samoa. Other community outreach projects include the Postgraduate Medical Education Program financed by the Okinawa Prefecture Government at Chubu Hospital in Okinawa where JABSOM administers a residency training program for graduates of Japanese medical schools; the Imi Ho'ola Program, a one-year post BA enrichment program for disadvantaged minority students; the Ke Ola O Hawaii, Inc. Community Partnership Program to increase

To place a classified notice:

HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in HMJ as space is available.

Nonmembers.—Please call 536-7702 for a nonmember form. Rates are \$1.50 a word with a minimum of 20 words or \$30. Not commissionable. Payment must accompany written order.

Misc.

Latex Glove Relief.—Free evaluation sample of gel reducing irritation from latex, nitrile and vinyl gloves. Limit 1 per Hawaii member's office. Call and record complete address or send business card to Sahara Cosmetics, ph 808-735-8081, P.O. Box 10869, Honolulu, HI 96816-0869 USA.

Announcement

Idyllic Maunaloa, Molokai.—New medical facility for future clinic. Generous rent concessions for operator offering basic medical services for growing small town community. Call Molokai Ranch Land Co. 1-800-254-6256.

New Service.—AESTHETICA Plastic and Laser Surgery Center is pleased to announce the incorporation of Ultrasonic-assisted Liposuction into the practice. Call 536-8866 or (800) 488-9855 for information.

Family Practice or Internal Medicine Physician wanted.—in Kapaa, Kauai (Board Certification or elig) Paul T. Esaki MD, 4-1461 Kuhio Hwy., Kapaa, Kauai, HI 96746. (808) 822-9886 Fax (808) 822-0938.

Office Space

Pearl City Business Plaza.—Tenant Improvement Allowances for Long Leases; 680+ sq ft; 24-hr security; free tenant/customer pkg; Gifford Chang 581-8853 DP, 593-9776, 531-3526.

Aiea Medical Office Space for Lease or Share.—Near Pali Momi hospital. 300 to 1000 sq ft. Excellent for branch office or specialty use. Call Dr. Wong at 487-7938.

Office Space for Rent.—769 sq ft, 3538 Waiialae Avenue, Rm 203, Call 732-0441.

primary health care in Hawaii's medically underserved areas; the Geriatric Education Center; the Center of Excellence for Disaster Medicine; and the Native Hawaiian Center of Excellence

The School of Medicine continues to make a valuable contribution to the State, the medical community and the Pacific Basin. It is an excellent bargain, generating financial support and jobs. It is an example of a partnership of resources between a medical school and a community which deserves to be recognized and protected.

Classified Notices

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For Sale.—Outstanding outpatient psychiatric practice in Kailua-Kona on the Big Island. 30 hrs/wk and could increase significantly if desired. No Medicaid; fee for service only. Available late June or July, 1998. Call (808) 329-5815.

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It is easy to get along with the Hawaii Supreme Court - if you're fond of children.

As all physicians know, medical liability is already a calamitous crazy-quilt of medical-legal-bureaucratic mine fields. Now the Hawaii Supreme Court in a preposterous decision, has decided that a doctor cannot refer a patient to a consultant for care without providing informed consent for the care provided by that consultant. A Honolulu orthodontist referred a patient to an oral surgeon who could have given a second opinion, but instead elected to operate. The surgery allegedly resulted in facial asymmetry, and neck, back and shoulder pain. The surgeon agreed to a financial settlement, but the plaintiff also sued the orthodontist for lack of informed consent. The Hawaii Supreme Court ruled that the orthodontist was obligated to provide informed consent for the patient prior to referral. Well, why not sue the brother-in-law who first recommended the orthodontist? Almost every day we are reminded that Americans are prisoners of a legal system that ignores logic and is deplorably out of control.

A good politician is about as unthinkable as an honest burglar.

Politicians and bureaucrats simply do not understand the power, dangers and injury potential of the laser. The Veterans' Health Administration's current optometry guidelines permit O.D.s to perform laser and other eye surgeries and to prescribe systemic drugs. The American Academy of Ophthalmology has mobilized in opposition and stimulated grass roots and congressional pressure to rescind the document and develop an appropriate manual for eye care. An even greater sin occurred in Oklahoma where the governor signed into law a bill permitting optometrists to use lasers. Organized ophthalmology tried in vain to educate the politicians, but were unable to stem the well-heeled lobbying forces of optometry. Where was the AMA in the lobbying effort? Reckless latitude in the use of lasers is a challenge for all of medicine, and this egregious Oklahoma law represents a giant step forward for pretenders. Naturopaths, chiropractors, cosmetologists, and even hair stylists, will soon petition for rights to use laser therapy.

Bad news does not improve with age.

As our elderly population increases, eye specialists are becoming an ever greater means of protection for the highway public. With the visual acuity loss of cataract glare, the reduced discrimination of macular degeneration, the field loss of glaucoma and stroke, and the dementia of Alzheimer's, elderly drivers are an ever greater risk on the highways. Many of these people plan their driving to avoid heavy traffic, long distances, bad weather and night driving, but the increased risk remains. To expect this population to self-regulate is not a realistic approach. A recent study in *JAMA* reported that drivers with a loss of 40% or more of visual field are 2.2 times more likely to have a crash. For the doctor, difficulties frequently arise when the patient is informed that his/her driving days have ended. To most people, the automobile is more than a means of transportation, it is also a major part of one's freedom. Loss of the car keys may precipitate a serious confrontation, and that is when our persuasive abilities may be severely challenged.

Don't make love to a stranger.

The federal government through the Center of Disease Control and Prevention (CDC) and the Health Resources and Service Administration (HRSA) have collaborated with the San Francisco Department of Public Health to establish a toll-free hot line to help doctors treat health-care workers who have been exposed to blood borne disease and infection by needle-stick injuries. It is called the Post-Exposure Prophylaxis Hotline (PEP) and is manned 24 hours each day by physicians. It can be accessed from anywhere in the United States by dialing (write this down, now) 888-448-4911.

Where is Jimmy Hoffa when we need him?

In New Jersey, a group of physicians working in an HMO called AmeriHealth petitioned to be represented by the United Food and Commercial Workers union in contract negotiations. The regional director, Dorothy Moore-Duncan, an official of the National Labor Relations Board, ruled that the doctors didn't meet the definition of employees under the NLRB act. Because the doctors treat

patients who aren't members of the HMO, and the practices are virtually all professional corporations, and because they control their own expenses, they retain the characteristics of independent businessmen. Collective bargaining remains outside the medical realm, and doctors must individually bend over for the juggernaut insurers and employers.

To live or let die? And I don't mean 007.

Yet another malpractice hazard is the alleged failure to let the patient die, contrary to his/her wishes. A 67-year-old retired meteorologist had amyotrophic lateral sclerosis, and supplied his doctor with a power of attorney, do not resuscitate (DNR) directive. He stated that he did not want to be kept alive by a respirator, and his pulmonologist had arranged for hospice care. However, when he began to gasp for breath, an aide called 911, and he was taken to the emergency room where he requested a tracheotomy. After discharge, he wrote a letter of thanks to the doctor saying, "I am much more a fighter for life than I imagined." Later, the doctor was stunned when he was sued for keeping the patient alive against his wishes! The plaintiff's attorney and the media played it up as ignoring a patient's wish to "die with dignity" case, when in fact it was a "patient changed his mind" case. The jury supported the doctor, but his reputation was publicly smeared. A study in the *Journal of American Geriatrics Society* revealed that of 688 written advance directives, only 22 were specific enough to guide physicians' decisions in whether to use life-extending treatment in the actual situation. Moreover, it was found that only about one-third had even mentioned the directives to their doctors.

The knowledge of courtesy and good manners begets liking, and an inclination to love one another.

The powers in charge of managed care plans, mainly HMOs, are sending their doctors to "communications school." Patient-satisfaction surveys have uncovered widespread resentment over brusque, rude or indifferent doctors. As a result, about 19,000 U.S. doctors, including Kaiser Permanente, Pacific Health Systems, Group Health of Minneapolis and Harvard Pilgrim Health Care of New England, have been sent to workshops primarily to learn how to listen, and to be courteous, kind and decent human beings (Civility 101?). One would assume that these qualities are inherent in the definition of physician, but the assembly line techniques of the HMO do not encourage a caring doctor-patient relationship.

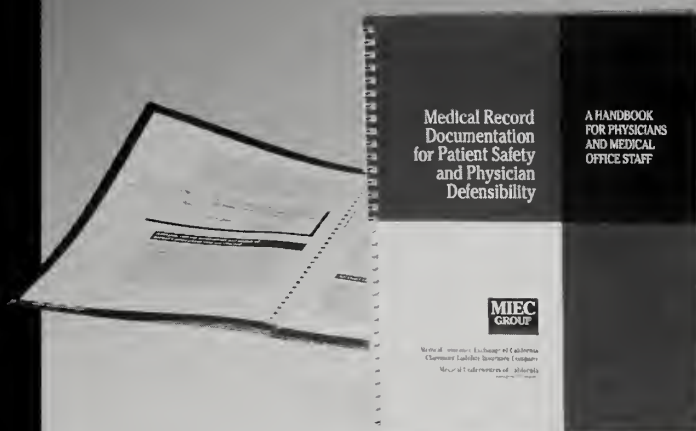
If everything seems to be going well, you have overlooked something.

Serendipity is a word which crept into our lexicon via a fairy tale. Yet it is a good word and useful in describing the faculty of fortunate, valuable and unexpected outcomes, occurring by accident. Pfizer Inc. developed a drug designed to combat heart disease, and labeled it *Viagra*. After seven clinical trials on numerous test subjects, the researchers conceded that the drug was a failure. The program was about to be permanently trashed when the scientists observed something quite unexpected. Test subjects told doctors they experienced more frequent, longer lasting, and more tumescent erections. Many subjects refused to return the pills when their tests ended, and others wanted to purchase the drug out of pocket. At first, it seemed like a side effect rather than a remedy, but Pfizer moved into high gear and tested 4,000 patients. Researchers found that the drug helped patients 50% to 80% of the time, depending upon the cause of the erectile dysfunction. The drug has won approval and in just two weeks, *Viagra* has already become one of the fastest selling drugs in the history of medicine. Pfizer expects that *Viagra* will become a household name like *Prozac* and will vault the company to the top of the pharmaceutical business. Serendipity—it really happens.

Addenda—

- ❖ The IRS is currently holding 96,000 tax refunds worth \$62 million in unclaimed dollars.
- ❖ Number of cows needed to supply footballs for a single NFL season: 3,000
- ❖ Should vegetarians eat animal crackers? Can fat people go skinny-dipping?

Aloha and keep the faith—rts ■



What's so important about defensible medical records?

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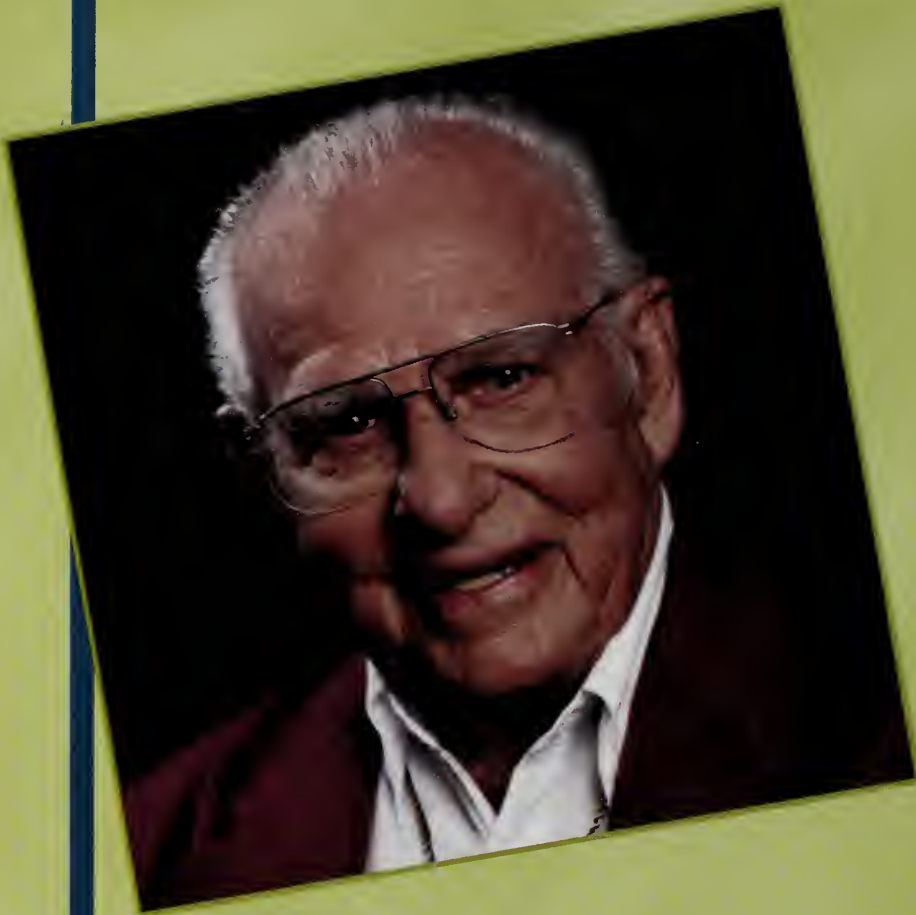
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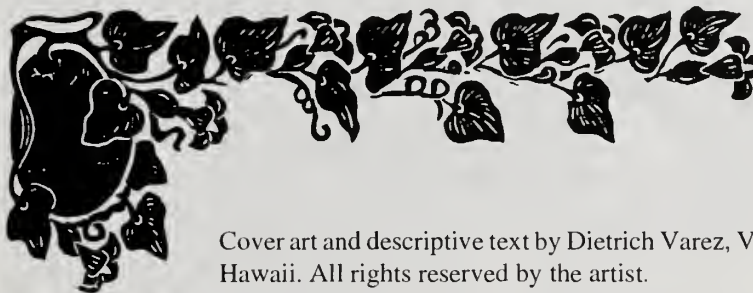
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'O He'e

Depicting a diver spearing an octopus among various sea creatures.

A Call to Physician Authors

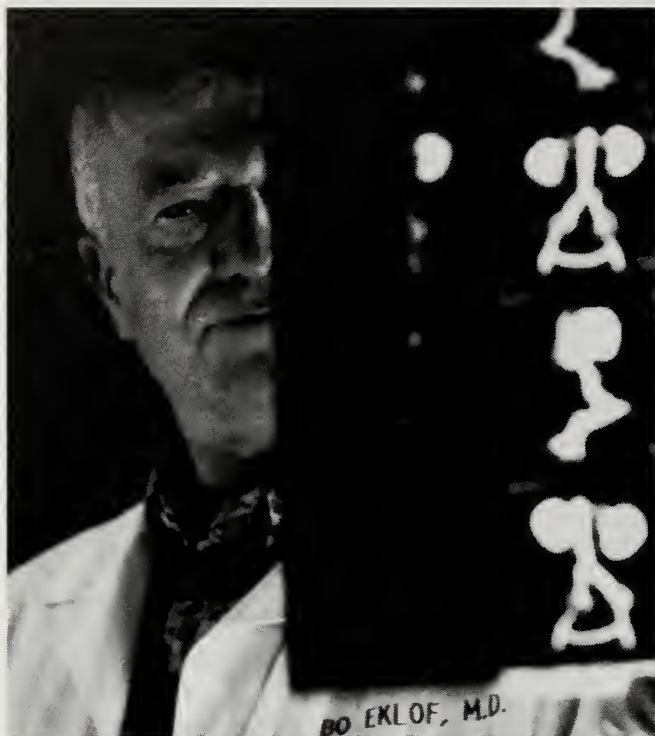
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Bruce Ballon, MD

July 16, 1998, 5:00 - 6:00 p.m.

QMC Imaging Classroom

Learning Objectives

At the conclusion, participants will be able to:

- Describe techniques of iris and oral fluorescein angiography.
- Understand the indications for performing these products.
- Discuss specific diseases which these tests are used.

– Friday Noon Conference –

Luncheon

Update in Prostate Cancer Screening

Stephen K. B. Chinn, MD

July 17, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants will be able to:

- Review of pros/cons of prostate cancer screening.
- Summarize results to date of prostate cancer screening.
- Describe new screening tests for prostate cancer.

We would like to acknowledge the generous Educational Grant from Hoechst Marion Roussel.

– Friday Noon Conference –

Luncheon

Cognitive Enhancers:

Staying Young at Brain

Enrico G. Camara, MD, FAPM

July 31, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants will be able to:

- Understand the mechanisms of aging in the brain.
- Evaluate the literature on pharmacologic cognitive enhancers.
- Describe a practical program for those who want to stay young at brain.

We would like to acknowledge the generous Educational Grant from Pfizer Labs.

Please call Fran Smith at 522-4471 for more information.



PAIN MANAGEMENT

Recommendations of the Governor's Blue Ribbon Panel on Living and Dying with Dignity

Norman Goldstein MD, Editor

After 1-1/2 years of meetings, the Governor's Panel on Living and Dying with Dignity unanimously approved the recommendations of the Pain Task Force's suggestions for pain management.

Recommendations

The Task Force, co-chaired by Max Botticelli and me, came up with many specific recommendations for better pain management. These recommendations should be implemented as soon as possible!

Thanks to the following task force members for their time and expertise. Look for manuscripts by many of these authorities in a future Special Issue on Pain in the Journal.

Lynn Dahl, MD
Reginald Ho, MD
Patricia Kalua, RN
Kathleen Kang-Kaulupali, Pharm. D.
Gary Okamoto, MD
Hob Osterlund, RN
Joseph Pepping, Pharm. D.
Don Purcell, MD
Gary Rinzler, MD
Barbara Shirland, RN
John Stiller, RN
Jon Streltzer, MD
Jeff Wang, MD

The Situation Today

Death is often accompanied by pain which is severe enough to make living unbearable. On the other hand an interdisciplinary approach to the palliation of pain can in most instances bring relief, comfort and dignity during ones final days.¹

Other symptoms which may contribute to an unbearable end of life experience include depression, anxiety, shortness of breath, nausea, constipation, diarrhea, wasting and delirium. Since pain is the most feared this is primarily addressed in our report but it should be recog-

nized that the relief of these other symptoms are as important in assuring the comfort and dignity of the dying.

An adequate level of pain control is not always instituted. The Hawaii Cancer Pain Initiative study of "Cancer Patients' Comfort, Knowledge and Satisfaction with Pain Management in Acute Care Settings" found:

- While generally satisfied with their care, 65 percent of respondents reported severe pain in the week prior to study; 45 percent reported mild to moderate pain even while being inpatients.
- 41 percent were unable to identify who of their healthcare team was responsible for their pain management other than their

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physician.

- While healthcare professionals appear to use current guidelines, "polypharmacy" [use of more than one medication from the same class to achieve the same result] exists.
- Multiple routes of administration are common in acute care settings. These tend to reduce the patients' understanding of their pain medications and to increase costs.

Patient identified barriers to effective pain relief are:

1. Failure of caregivers to believe complaints of pain.
2. Fear of addiction.
3. Undesirable side effects.
5. High costs of opiates.
5. Delay in response to requests to nurses for medication.

There is also a perception that many physicians, who have the greatest responsibility for pain management, have a less than optimal understanding of pain control. They have unreasonable concerns regarding the activities of the Drug Enforcement Administration [DEA], fear of lethal side effects and often underestimate the impact of pain on the lives of their patients.

Several health care institutions in the State of Hawaii have instituted pain management programs that have improved pain management in those institutions. This suggests that requiring pain management programs in health care institutions would have a major impact on the lives of patients receiving care in those institutions.

Including pain management as an educational requirement in all health care professional training and continuing education programs would also be of significant benefit.

We Recommend

1. That the Agency for Healthcare Policy and Research [AHCPR] guidelines for the treatment of pain be accepted as the community standard of care for all health care providers.²
2. That a right to skilled pain management be included in a "Patients Bill of Rights" at all Department of Health certified and/or licensed facilities.³
3. That pain management programs be instituted in each of those facilities.
4. That the AHCPR guidelines be accepted as practice standards in each of those facilities.
5. That educational course work in pain management be a required part of continuing education programs of licensed facilities.
6. That the Department of Health licensing and certification teams specifically include pain management when reviewing records, observing patient/client care, interviewing staff and clients, etc., in their overall review of patient care plans/management.
7. That the Department of Health cite any institution that it finds deficient in the areas noted above.
8. That pain management be part of the required curriculum of all medical, nursing and other health care professional schools in the State of Hawaii.
9. That professional organizations be challenged to adopt formally AHCPR standards and incorporate them in their peer review and continuing education programs.

References

1. Levy, M.H. Pharmacologic Treatment of Cancer Pain. *N. Eng. J. Med.* 335; 1124-1132.
2. Management of Cancer Pain, Clinical Practice Guideline Number 9, U.S. Department of Health and Human Services, from the Agency for Health Care Policy and Research Publication No. 94-0592, March 1994, 257 pages.
3. Institutions to be monitored: Acute Care Hospitals, Skilled nursing and intermediate care facilities, Hospice programs and home health and home care agencies.

This issue contains two manuscripts related to psychiatry. It is not one of our "Special Issues," but does have information about care of psychiatric patients and should be of interest to all physicians.

Mahalo to Anders and Olson and to Patrick and associates for important data for Hawaii's psychiatric care givers and administrators.

President's Message

Leonard Howard MD
President, Hawaii Medical Association

The Governor's Blue Ribbon Committee on Living and Dying has submitted their report after 18 months of work. The majority of the committee urges the Governor to support any legislation allowing Physician Assisted Suicide (PAS) and/or Physician Assisted Death (PAD). A dissenting minority report was also submitted opposing the same. This, plus the special edition of the Hawaii Medical Journal, which was criticized by many members as indicating that the HMA supported PAS and PAD, has stimulated this personal opinion.

Your Hawaii Medical Association continues to support the AMA policy opposing both PAS and PAD. We support the efforts to improve pain management and end-of-life care to eliminate the horror stories of terminal suffering that we have all heard. The lead article in AMNews of November 15, 1996 said it very well: *"Although for some patients it might appear compassionate to intentionally cause death, institutionalizing physician-assisted suicide as a medical treatment would put many more patients at serious risk for unwanted and unnecessary death," they said. "Rather than recognize a right to physician-assisted suicide, our society instead should recognize the urgent necessity of extending to all patients the palliative care they need and redouble our efforts to provide such care to all."* The AMA also submitted an amicus brief to the US Supreme Court when it was considering the issue of PAS in regard to the Oregon initiative. The AMA brief begins by affirming that: *"The right to control one's medical treatment is among the most important rights that the law affords each person." This includes the right to have unwanted life-prolonging treatment withheld or withdrawn and to have all medication necessary to alleviate physical pain, even where such medication would hasten death. Through these means, patients can avoid entrapment in a prolonged, painful, or overly medicalized dying process."* The AMA believes firmly that the lower court was wrong in taking the unprecedented step of announcing a right to control the timing and manner of one's death through the use of physician-assisted suicide. The power to assist in intentionally taking the life of a patient is counter to the health care profession's central mission of healing. It is a power that most health



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†Double-blind, comparative clinical studies have not been conducted to evaluate comparative efficacy.

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The antimicrobial action may be attributable to inhibition of microbial cellular protein synthesis. A normalization of keratinization leading to an anticommedonal effect of azelaic acid may also contribute to its clinical activity. Electron microscopic and immunohistochemical evaluation of skin biopsies from human subjects treated with AZELEX[®] demonstrated a reduction in the thickness of the stratum corneum, a reduction in number and size of keratohyalin granules, and a reduction in the amount and distribution of filaggrin (a protein component of keratohyalin) in epidermal layers. This is suggestive of the ability to decrease microcomedo formation. **Pharmacokinetics:** Following a single application of AZELEX[®] to human skin *in vitro*, azelaic acid penetrates into the stratum corneum (approximately 3 to 5% of the applied dose) and other viable skin layers (up to 10% of the dose is found in the epidermis and dermis). Negligible cutaneous metabolism occurs after topical application. Approximately 4% of the topically applied azelaic acid is systemically absorbed. Azelaic acid is mainly excreted unchanged in the urine but undergoes some β -oxidation to shorter chain dicarboxylic acids. The observed half-lives in healthy subjects are approximately 45 minutes after oral dosing and 12 hours after topical dosing, indicating percutaneous absorption rate-limited kinetics. Azelaic acid is a dietary constituent (whole grain cereals and animal products), and can be formed endogenously from longer-chain dicarboxylic acids, metabolism of oleic acid, and ω -oxidation of monocarboxylic acids. Endogenous plasma concentration (20 to 80 mg/mL) and daily urinary excretion (4 to 28 mg) of azelaic acid are highly dependent on dietary intake. After topical treatment with AZELEX[®] in humans, plasma concentration and urinary excretion of azelaic acid are not significantly different from baseline levels. **INDICATIONS AND USAGE:** AZELEX[®] is indicated for the topical treatment of mild-to-moderate inflammatory acne vulgaris. **CONTRAINDICATIONS:** AZELEX[®] is contraindicated in individuals who have shown hypersensitivity to any of its components. **WARNINGS:** AZELEX[®] is for dermatologic use only and not for ophthalmic use. There have been isolated reports of hypopigmentation after use of azelaic acid. Since azelaic acid has not been well studied in patients with dark complexions, these patients should be monitored for early signs of hypopigmentation. **PRECAUTIONS: General:** If sensitivity or severe irritation develop with the use of AZELEX[®], treatment should be discontinued and appropriate therapy instituted. **Information for patients:** Patients should be told: 1. To use AZELEX[®] for the full prescribed treatment period. 2. To avoid the use of occlusive dressings or wrappings. 3. To keep AZELEX[®] away from the mouth, eyes and other mucous membranes. If it does come in contact with the eyes, they should wash their eyes with large amounts of water and consult a physician if eye irritation persists. 4. If they have dark complexions, to report abnormal changes in skin color to their physician. 5. Due in part to the low pH of azelaic acid, temporary skin irritation (pruritus, burning, or stinging) may occur when AZELEX[®] is applied to broken or inflamed skin, usually at the start of treatment. However, this irritation commonly subsides if treatment is continued. If it continues, AZELEX[®] should be applied only once-a-day, or the treatment should be stopped until these effects have subsided. If troublesome irritation persists, use should be discontinued, and patients should consult their physician. (See ADVERSE REACTIONS.) **Carcinogenesis, mutagenesis, impairment of fertility:** Azelaic acid is a human dietary component of a simple molecular structure that does not suggest carcinogenic potential, and it does not belong to a class of drugs for which there is a concern about carcinogenicity. Therefore, animal studies to evaluate carcinogenic potential with AZELEX[®] Cream were not deemed necessary. In a battery of tests (Ames assay, HGPRT test, Chinese hamster ovary cells, human lymphocyte test, dominant lethal assay in mice), azelaic acid was found to be nonmutagenic. Animal studies have shown no adverse effects on fertility. **Pregnancy: Teratogenic Effects: Pregnancy Category B.** Embryotoxic effects were observed in Segment I and Segment II oral studies with rats receiving 2500 mg/kg/day of azelaic acid. Similar effects were observed in Segment II studies in rabbits given 150 to 500 mg/kg/day and in monkeys given 500 mg/kg/day. The doses at which these effects were noted were all within toxic dose ranges for the dams. No teratogenic effects were observed. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed. **Nursing Mothers:** Equilibrium dialysis was used to assess human milk partitioning *in vitro*. At an azelaic acid concentration of 25 $\mu\text{g/mL}$, the milk/plasma distribution coefficient was 0.7 and the milk/buffer distribution was 1.0, indicating that passage of drug into maternal milk may occur. Since less than 4% of a topically applied dose is systemically absorbed, the uptake of azelaic acid into maternal milk is not expected to cause a significant change from baseline azelaic acid levels in the milk. However, caution should be exercised when AZELEX[®] is administered to a nursing mother. **Pediatric Use:** Safety and effectiveness in pediatric patients under 12 years of age have not been established. **ADVERSE REACTIONS:** During U.S. clinical trials with AZELEX[®], adverse reactions were generally mild and transient in nature. The most common adverse reactions occurring in approximately 1-5% of patients were pruritus, burning, stinging and tingling. Other adverse reactions such as erythema, dryness, rash, peeling, irritation, dermatitis, and contact dermatitis were reported in less than 1% of subjects. There is the potential for experiencing allergic reactions with use of AZELEX[®]. In patients using azelaic acid formulations, the following additional adverse experiences have been reported rarely: worsening of asthma, vitiligo depigmentation, small depigmented spots, hypertrichosis, reddening (signs of keratosis pilaris), and exacerbation of recurrent herpes labialis. **DOSAGE AND ADMINISTRATION:** After the skin is thoroughly washed and patted dry, a thin film of AZELEX[®] should be gently but thoroughly massaged into the affected areas twice daily, in the morning and evening. The hands should be washed following application. The duration of use of AZELEX[®] can vary from person to person and depends on the severity of the acne. Improvement of the condition occurs in the majority of patients with inflammatory lesions within four weeks. **HOW SUPPLIED:** AZELEX[®] is supplied in collapsible tubes in a 30 gm size, 30 g - NDC 0023-8694-30. **Note:** Protect from freezing. Store between 15°-30°C (59°-86°F). **Caution:** Federal (U.S.A.) law prohibits dispensing without a prescription. Distributed under license, U.S. Patent No. 4,386,104.

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care professionals do not want and could not control. The brief concludes that "The sentiment for physician-assisted suicide is not the right answer to the problem of inadequate care. Although for some patients it might appear compassionate to hasten death, institutionalizing physician-assisted suicide as a medical treatment would put many more patients at serious risk for unwanted and unnecessary death." Rather than recognize a right to physician-assisted suicide, the AMA asserts that "we should recognize instead the urgent necessity of extending to all patients the palliative care they need and redouble our efforts to provide such care to all."

At an Intensive Seminar in Bioethics sponsored by the Bioethics Consultation Group, Inc. of Berkeley, California, a full day was spent on Decisions at the End of Life. A message from that day stuck in my mind, and I have quoted it many times since hearing it. "The difference between withholding Nutrition and Lethal Injection is the difference between letting die and killing." To me this is the essence of the debate. Will we overthrow the teachings of the philosophers of the last 2000 years or will we hew to some new idea that physicians are to be the instrument by which an individual chooses to end his or her life? As for me, I will continue to support the concept that physicians preserve life as long as possible, but prevent suffering. If, by giving a dose of MS adequate to relieve pain I cause respiratory failure, then so be it. The patient's disease has been the essential reason for the death, not my action. On the other hand, if I inject a lethal dose of KCl or prescribe a lethal dose of barbiturate for a patient, then I am the primary cause of the death of the patient. It is the *intention* of our actions that determines their ethical nature. If the state wishes to provide a way that people can voluntarily end their own life for whatever reason, do so, but leave medicine out of it.

In closing, I wish to make it perfectly clear that the HMA leadership has NO control over what is or is not printed in the Hawaii Medical Journal. The content is determined by the Editorial Board and no other. This is as it should be and provides an opportunity for both sides of an issue to be heard.

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Medical School Hotline

Interest in Alternative Medicine by First Year Medical Students at the John A. Burns School of Medicine

Leslie Q. Tam, Ph.D.
Director, Office of Medical Education
and Eugene M. Kawaguchi, M.D.
Emergency Medicine Physician

Alternative Medicine (AM) is being used increasingly to complement allopathic medicine in the United States. In 1993, Eisenberg reported that more visits were made to AM practitioners (425 million) than to generalist physicians (388 million).¹ Over \$13.7 billion were paid for services such as holistic healing, homeopathy, naturopathy, yoga, t'ai chi, acupuncture, as well as manipulative and touch therapy, vitamins, herbals and macrobiotics, among many other forms of AM.

Recently, an informal survey was conducted of first year medical students at the John A. Burns School of Medicine (JABSOM). Students were asked whether they knew of, have used, knew of use by friends or relatives, or

would enroll in an AM elective if any of the following eleven modalities were covered:

- 1) Acupuncture:² The stimulation of certain points in the body to balance the movement of energy within the body. A major part of traditional Chinese medicine (TCM) which includes acupuncture, moxibustion, herbalism, massage, diet and exercise such as t'ai chi.
- 2) Acupressure & Shiatsu: The application of "finger pressure" to points (tsubo) to stimulate "ki," the Japanese word for Chi or energy.
- 3) Ayurvedic Medicine: The system of healthcare practiced in India and Sri Lanka, including detoxification, diet, exercise, herbs and techniques to improve mental and emotional health.
- 4) Aromatherapy: The use of essential oils (about 150 have been extracted) in holistic treatments (inhalations, diffusers, massage, baths and compresses) to improve health and emotional well-being and restore balance to



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the body. 5) Chinese Herbalism: The use of herbs to treat and prevent mental, physical and emotional ill health. 6) Five Mountain Medical Community:³ The North Hawai'i Community Hospital (NHCH) in Waimea embodies the Hawaiian spirit of healing and integrates complementary and allopathic medicine. People who visit the hospital experience a family-friendly atmosphere, a full range of services and amenities, and a healing of body, mind, and spirit. 7) Macrobiotics: The balancing of Chinese Yin and Yang through diet, exercise (t'ai chi or yoga), rest, and mental outlook each day. 8) Native Hawaiian Healing:⁴ Practices used by Hawaiians to maintain harmony in nature, including man. Healing of mind and body includes use of prayer, herbs, and others to enhance health and wellness. 9) Naturopathy: The healthcare system that features only natural ingredients and disciplines (e.g. healthy diet, fasting, hydrotherapy exercise, and relaxation techniques) to help the body heal itself. 10) Nutritional Therapy: The use of the diet to treat and prevent illness and to restore the body to a natural, healthy equilibrium. 11) Spiritual and Therapeutic Touch Healing: The re-orientation of the body's own "healing energy" by touch, usually from an experienced practitioner.

The questionnaire was distributed during a student colloquium and 42 of 56 students or 75% returned the survey by the end of the working day. The numbers of students having used or are currently using each of the practices were:

- Chinese herbalism (8)
- Aromatherapy (7)
- Acupressure & shiatsu (5)
- Acupuncture (4)
- Native Hawaiian Healing (4)
- Naturopathy (4)
- Nutritional Therapy (4)
- Ayurvedic Medicine (2)
- Macrobiotics (2)
- Spiritual & Touch Healing (1)
- Five Mountain Community (0)

The numbers of students knowing of friends, relatives or others using each of the practices were:

- Chinese herbalism (28)
- Acupuncture (26)
- Acupressure & shiatsu (20)
- Native Hawaiian healing (15)
- Aromatherapy (13)
- Nutritional therapy (12)
- Naturopathy (11)
- Spiritual & touch healing (11)
- Macrobiotics (6)
- Five Mountain Community (4)
- Ayurvedic Medicine (2)

Thirty-four percent of students had interest in one or more of the eleven AM practices and indicated that they would enroll in an elective if the subject was included:

- Acupressure & shiatsu (19)
- Chinese herbalism (19)
- Acupuncture (18)

- Native Hawaiian Healing (18)
- Nutritional Therapy (18)
- Five Mountain Community (14)
- Macrobiotics (15)
- Naturopathy (14)
- Spiritual & Touch Healing (14)
- Ayurvedic Medicine (8)
- Aromatherapy (8)

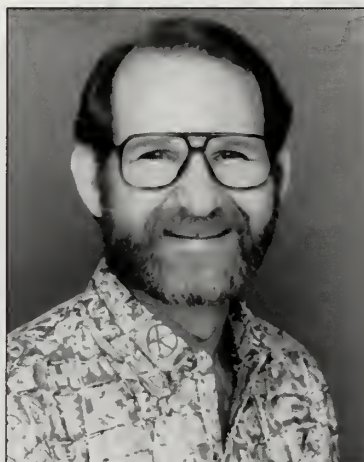
About half of the 125 medical schools in the United States offer some form of instruction in AM. At the JABSOM in February, 1997 two medical students organized a full-day, "Mind and Body Medicine Symposium." Invited speakers included faculty who delivered the key address "Alternative Medicine ... Out of the Closet" and others who spoke on "Integration of Alternative and Allopathic Medicine," "Bio-Magnetic Touch Healing," "Biofeedback," "Healing Touch," "Naturopathy," and "Acupuncture."

In response to the growing student and faculty interest, curriculum planners at the John A. Burns School of Medicine are searching for ways to introduce AM into the problem-based learning curriculum.

Students are encouraged to apply principles of evidence-based medicine, where possible, and to critically evaluate statements of global efficacy. Opportunities must be found for medical students to work in community settings in which alternative medicine is practiced, including dedicated sites such as the North Kohala Community Hospital. Research into the use of AM by Hawai'i's many cultural and ethnic groups must be encouraged. Currently, the use of AM is widespread and the expectations are that physicians of the future understand its benefits and adverse effects. However, the question of what educational experiences should be offered is unclear with curriculum planners who debate these issues as they prepare physicians of the future.

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2. Descriptions of AM therapies were from *Alternative Healthcare: A Comprehensive Guide To Therapies & Remedies*. N. Bradford (Ed.). Reed Internat. Books, Ltd. 1996. The therapies included in the questionnaire were randomly selected. Other well known AM therapies such as chiropractic, homeopathy and lesser known therapies such as autogenic training, cymatics, and the art therapies were not purposefully excluded.
3. website: <http://www.fivemtn.org>
4. Gutmanis, J. Kahuna La'au Lapa'au The Practice of Hawaiian Herbal Medicine. Island Heritage Publishing, 1997.



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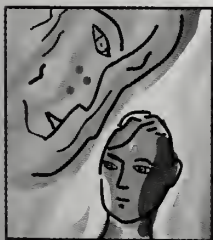
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Pseudomembranous colitis has been reported with nearly all antibacterial agents, including erythromycin, and may range in severity from mild to life-threatening. Therefore, it is important to consider this diagnosis in patients who present with diarrhea subsequent to the administration of antibacterial agents.

Treatment with antibacterial agents alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of "antibiotic-associated colitis."

After the diagnosis of pseudomembranous colitis has been established, therapeutic measures should be initiated. Mild cases of pseudomembranous colitis usually respond to drug discontinuation alone. In moderate to severe cases, consideration should be given to management with fluids and electrolytes, protein supplementation and treatment with an antibacterial drug clinically effective against *C. difficile* colitis.

PRECAUTIONS

General: For topical use only; not for ophthalmic use. Concomitant topical acne therapy should be used with caution because a possible cumulative irritancy effect may occur, especially with the use of peeling, desquamating or abrasive agents. If severe irritation develops, discontinue use and institute appropriate therapy.

The use of antibiotic agents may be associated with the overgrowth of nonsusceptible organisms including fungi. If this occurs, discontinue use and take appropriate measures.

Avoid contact with eyes and all mucous membranes.

Information for Patients: Patients using BENZAMYCIN® Topical Gel should receive the following information and instructions.

1. This medication is to be used as directed by the physician. It is for external use only. Avoid contact with the eyes, nose, mouth, and all mucous membranes.

2. This medication should not be used for any disorder other than that for which it was prescribed.

3. Patients should not use any other topical acne preparation unless otherwise directed by physician.

4. Patients should report to their physician any signs of local adverse reactions.

5. BENZAMYCIN® Topical Gel may bleach hair or colored fabric.

6. Keep product refrigerated and discard after 3 months.

CARCINOGENESIS, MUTAGENESIS AND IMPAIRMENT OF FERTILITY

Data from a study using mice known to be highly susceptible to cancer suggests that benzoyl peroxide acts as a tumor promoter. The clinical significance of this is unknown.

No animal studies have been performed to evaluate the carcinogenic and mutagenic potential or effects on fertility of topical erythromycin. However, long-term (2-year) oral studies in rats with erythromycin ethylsuccinate and erythromycin base did not provide evidence of tumorigenicity. There was no apparent effect on male or female fertility in rats fed erythromycin (base) at levels up to 0.25% of diet.

Pregnancy, Teratogenic Effects: Pregnancy CATEGORY C: Animal reproduction studies have not been conducted with BENZAMYCIN® Topical Gel or benzoyl peroxide.

There was no evidence of teratogenicity or any other adverse effect on reproduction in female rats fed erythromycin base (up to 0.25% diet) prior to and during mating, during gestation and through weaning of two successive litters.

There are no well-controlled trials in pregnant women with BENZAMYCIN® Topical Gel. It is also not known whether BENZAMYCIN® Topical Gel can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. BENZAMYCIN® Topical Gel should be given to a pregnant woman only if clearly needed.

Nursing Women: It is not known whether BENZAMYCIN® Topical Gel is excreted in human milk after topical application. However, erythromycin is excreted in human milk following oral and parenteral erythromycin administration. Therefore, caution should be exercised when erythromycin is administered to a nursing woman.

Pediatric Use: Safety and effectiveness of this product in pediatric patients below the age of 12 have not been established.

ADVERSE REACTIONS

In controlled clinical trials, the total incidence of adverse reactions associated with the use of BENZAMYCIN® Topical Gel was approximately 3%. These were dryness and urticarial reaction.

The following additional local adverse reactions have been reported occasionally: irritation of the skin including peeling, itching, burning sensation, erythema, inflammation of the face, eyes and nose, and irritation of the eyes. Skin discoloration, oiliness and tenderness of the skin have also been reported.

DOSEAGE AND ADMINISTRATION

BENZAMYCIN® Topical Gel should be applied twice daily, morning and evening, or as directed by a physician, to affected areas after the skin is thoroughly washed, rinsed with warm water and gently patted dry.

How Supplied and Compounding Directions:

Size (Net Weight)	NDC 0066-	Benzoyl Peroxide Gel	Active Erythromycin Powder (In Plastic Vial)	Ethyl Alcohol (70%) To Be Added
11.65 grams (as dispensed) SAMPLE	0510-05	10 grams	0.4 grams	1.5 mL
23.3 grams (as dispensed)	0510-23	20 grams	0.8 grams	3 mL
46.6 grams (as dispensed)	0510-46	40 grams	1.6 grams	6 mL

Prior to dispensing, tap vial until powder flows freely. Add indicated amount of ethyl alcohol (70%) to vial (to the mark) and immediately shake to completely dissolve erythromycin. Add this solution to gel and stir until homogeneous in appearance (1 to 1.5 minutes). BENZAMYCIN® Topical Gel should then be stored under refrigeration. Do not freeze. Place a 3-month expiration date on the label.

NOTE: Prior to reconstitution, store at room temperature between 15° and 30°C (59° - 86°F).

After reconstitution, store under refrigeration between 2° and 8°C (36° - 46°F).

Do not freeze. Keep tightly closed. Keep out of the reach of children.

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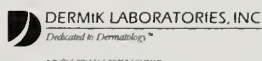
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Chart Audit of Inpatient Treatment of Schizophrenic Patients: Implications for Development of Coordinated Care Paths

Robert L. Anders DrPH, APRN, CS* and Tom Olson, PhD, RN, CS**

Hawaii's reputation for progressiveness in health care is being seriously challenged. Within both the public and private sectors resources are becoming more limited, particularly in the area of psychiatry. At the same time, the rising cost of care and the quality issues raised in the Department of Justice investigation of Hawaii State Hospital, the state's only public sector psychiatric facility, have created substantial concern from consumers, providers and payers regarding the effectiveness of mental health services.^{1,2} This concern persists, despite the recent accreditation of the hospital by the Joint Commission on the Accreditation of Health Care Organizations, after a 20-year lapse.³

In response to these pressures, the use of coordinated care paths has gained widespread use.^{4,5} A coordinated care path is a practice guideline developed by a multidisciplinary team which provides sequencing, timing of interventions, and expected patient outcomes for specific diagnostic groups. This usually includes participation of a nurse case manager to facilitate the implementation of the care path, monitor patient variances, and coordinate patient care. The limited literature on the successful use of care paths for the management of various diagnoses shows some promise in terms of decreasing costs while maintaining or improving quality.⁶⁻¹²

The purpose of this study was to use the RAND Criteria for Assessing Quality of Inpatient Treatment of Schizophrenia to obtain relevant clinical information concerning the acute inpatient treatment of schizophrenic patients hospitalized at the study site. The findings were used in the development of a coordinated care path to manage the inpatient care of acute schizophrenia patients.

Literature Review

The first part of the literature review focused on the *Phase I-A Literature Review: Treatment Approaches for Schizophrenia*, published by the Center for Mental Health Services Research at the University of Maryland at Baltimore¹³⁻¹⁷ (see Anders, Tomai, Clute, & Olson,¹⁸ for further information on the development of coordinated care paths). This review is a state-of-the-knowledge meta

analysis of what is known concerning the treatment of schizophrenia. The analysis reveals that the vast majority of patients who are responsive to medications will be so with the range of 300-750 mg chlorpromazine equivalents; there is no evidence that loading doses improve treatment response; no adjunctive pharmacological agent has been clearly shown to benefit the majority of schizophrenic patients; individual and group therapy has not been shown to prevent relapse or to reduce psychiatric symptoms; family interventions may delay relapse; and there is no evidence that family interventions improve functional status or family well being.

The second part of the literature review focused on 50 research articles concerning the inpatient treatment of schizophrenic patients in a general hospital.¹⁹ It revealed seven primary domains of treatment which should be addressed for hospitalized patients. The domains included aftercare linkages, medication management, social supports, family education, and the need to address substance abuse issues.

The final part of the review focused on the psychiatric nursing literature. Most notably, in a review of 77 studies dealing with outcome research in psychiatric nursing, Merwin & Mauck²⁰ found that few of the studies built upon previous research, weakening the scientific basis of the findings related to outcomes. In addition, studies involving nursing care provided to schizophrenic patients tended to lack descriptions of how the scientific validity of the care was determined.

Method

Records were reviewed for a stratified by month, random sample of all patients with schizophrenic (DSM IV 295, including subtypes). This included patients whose admissions and discharges took place between November 1994 and October 1995, in a 530-bed general non-profit hospital located in Honolulu, Hawaii. Psychiatric beds in this facility are located in three areas: a 10-bed crisis unit, a 22-bed locked unit, and a 24-bed open unit. All patients were evaluated and treated by attending psychiatrists.

The records review was facilitated by the development of a Psychiatric Records Abstract Instrument (PRAI). The instrument incorporates the RAND Criteria for Assessing Quality for Inpatient Treatment of Schizophrenia.²¹ The resulting guidelines can be grouped into 12 categories: 1) demographic data; 2) general health status; 3) master treatment plan; 4) medications; 5) physician care; 6) nursing care; 7) teaching; 8) treatment of medical problems; 9) treatment of substance abuse; 10) intermediate outcome indicators; 11) discharge plan; and 12) discharge appropriateness.

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Table 1. Characteristics of Patient Sample (N=12)

	Number	Percent
Gender		
Men	7	58%
Women	5	42%
Marital Status		
Married	8	67%
Single	3	25%
Divorce	1	8%
Insurance		
Medicaid	6	50%
Medicare	3	25%
Quest (Managed Care Medicaid)	3	25%
Age *	Number	
20-35 Years	6	
36-50 Years	6	
* S.D. 9.2 Days		
Length of Stay**		
Average 7.6 Days		
**S.D. 3.2 Days		

The reviewer was a registered nurse with extensive experience in psychiatric nursing who was blinded to the research objectives. The principal investigator instructed the reviewer on the use of the tool and then piloted the PRAI with one medical record not included in the audit. Differences in findings plus any questions or issues concerning the use of the tool were clarified and revisions were made as a result of the pilot survey.

Findings

Demographics and General Health Status

A summary of the significant conclusions is grouped using the twelve categories found in the PRAI. Only the findings which varied markedly from the RAND study recommendations are discussed. The patterns of care for individual patients were scored and then an aggregate score for the entire sample was computed.

Patient characteristics are illustrated in Table 1. Each patient had a diagnosis on Axis I, II, and III. The number of diagnoses ranged from two to six. Ethnic groups were fairly evenly distributed, with patients of Caucasian, Japanese, Chinese, Filipino, Samoan, and part-Hawaiian ancestry represented. It should be noted that the lack of mixed ancestry is probably a function of self-reporting, rather than an actual absence of mixed ancestry patients.

The psychiatric evaluation was completed within 24 hours of admission for all subjects. The medical evaluation was also finished within 24 hours for 94% (11) of the patients. No patient information was collected about an EEG, PPD, or HIV test. A physical and sexual abuse history was completed in 58% (7) of the patients.

Treatment Plan and Medications

The initial treatment plan was documented within 24 hours of admission for all patients (See Table 2). A specific plan to use or not use medications was in place for all patients, while a plan to use or

Table 2. Master Treatment Plan and Medications

Master Treatment Plan	Yes	No
Re-evaluate 72 hours	25%	75%
Weekly Review	71%	29%
Plan for Medication Use	66%	34%
Plan to use or not use family interventions	42%	58%
Physician Participation in Plan	50%	50%
Pharmacy & Psychology in Plan	33%	67%

not use family interventions was absent in seven of the records reviewed. Documentation that the master treatment plan had been reviewed by the physicians within 72 hours was absent 75% of the time. The weekly review of the plan by the mental health team was also absent in 42% of the cases. In 50% of the charts there was evidence of physician collaboration with the multidisciplinary team concerning the master treatment plan. Psychology and pharmacy involvement was present in 33% (5) of the patients.

All of the patients had antipsychotic medications prescribed. As with the antipsychotic drugs, none of the antiparkinsonian dosages were outside the recommended ranges. In 58% (7) of the patients other drugs such as anticonvulsant, benzodiazepines, lithium carbonate, and antidepressants were given. These other drugs included lorazepam, sertraline, doxepin, diazepam, clonazepam, and nefazodone. For all of the medications, there was documentation that they were taken by the patient.

Nursing and Physician Care

The nursing care in 100% of the patients was directly provided by and supervised by a registered nurse. In addition, in all cases the initial assessment included a mental and physical status examination. In 83% (10) of the patients, the initial work-up included an assessment of suicidal potential, orientation and memory, and substance abuse. For all of the patients, these items were assessed by the physician within 24 hours of admission.

Three patients (25%) were placed in restraints during hospitalization. In each case, a clear statement of the reason for restraints was documented. In two of the instances, the reason involved imminent danger to self or others. In all three cases the patient was monitored continuously while in restraints.

There was a lack of adequate notation concerning the side effects of medications, with documentation present in only one chart. In all cases, the patients were told the names of their medication and their target symptoms. The majority of patients were taught about the side effects of their antipsychotic medications and half were taught about the signs and symptoms of recurring mental illness.

Intake and output and weight were not recorded daily, but simply on a case-by-case basis. However, vital signs were taken and recorded daily and patients were weighed weekly. The amount of meals eaten and elimination patterns were recorded daily.

There was excellent compliance with the recommended physician responsibilities. In all cases physicians saw their patients daily, made daily progress notes, completed initial evaluations, and as-

Table 3. Teaching and Discharge

Teaching	Yes	No
Side Effects Medications	75%	25%
Signs & Symptoms of Returning Mental Illness	50%	50%
Discharge Plan	Yes	No
Factors precipitating admission addressed	67%	33%
Importance of Taking Medications on		
Discharge Charge Documented	84%	16%
Specific Aftercare appointment made	58%	42%
Aftercare staff met with patient in hospital	50%	50%
Family/caregiver involved in plan	41%	59%
Discharge	Yes	No
At discharge factor(s) precipitating admission addressed	88%	12%
Significant reduction in psychiatric symptoms	88%	12%

sumed responsibility for the diagnosis and management of medications. The attending physician in 100% of the cases was a psychiatrist.

Treatment of Medical & Substance Abuse Challenges

Seven patients had an Axis III medical diagnosis. Five of these seven patients had a treatment plan for the medical problems completed within 72 hours of admission. Of the seven patients with medical problems, six treatment plans addressed the identified problem.

One third of the patients were identified as having a need for substance abuse treatment. Three of these individuals had a plan for concurrent treatment of the substance abuse and mental illness. These patients were referred to an aftercare program on discharge from the hospital. One of the four patients had a plan for management of alcohol withdrawal.

Outcome Indicators and Discharge

None of the patients committed or attempted suicide while in the hospital. Two patients (17%) were aggressive toward property or toward others while in the hospital and two patients were readmitted within one month of discharge.

Non-compliance with medication was a common reason patients were admitted. The compliance issue was usually addressed with the patient during the hospitalization. In the discharge plan, the factors precipitating admission were addressed for two thirds of the patients while for one third the precipitating event(s) were apparently not discussed (See Table 3).

By the time of discharge, the factors that had precipitated the admission had been addressed for eight of the patients. The psychiatric symptoms were also reduced a significant degree for eight of the patients. A Global Assessment of Functioning (GAF) score was not completed at either admission or discharge for any patient. Slightly half of the patients had a specific appointment made for their first aftercare visit. Aftercare staff met with 50% of the patients

before they were discharge. Forty-one percent of the time the family or caregiver was involved with the discharge planning process.

Discussion

Although the findings suggest that the care of patients with a diagnosis of schizophrenia, and in need of acute hospitalization, was generally adequate when compared with the RAND recommendations, several opportunities for improvement were identified. These included medical tests, master treatment planning, documentation of care, patient teaching, and discharge planning.

The findings are discussed in the order they were identified on the PSRI. First, the finding that the GAF score on the Axis diagnoses was absent in all cases may suggest that psychiatrists find the scale too subjective as to be meaningful in actual practice or simply that psychiatrists are not skilled in its use. Further exploration of the meaning of this deficiency is needed.

Regarding medical practice, the use of PPD, EEG, and HIV testing was not evident in this audit. Given the high rate of homelessness, poor nutrition, and frequently impaired judgment with many schizophrenic patients it seems reasonable that TB and HIV testing should be done. However, in discussion with staff psychiatrists there seems to be some reluctance to order these tests. The reason for this objection was not identified.

The documentation of the master treatment plan was problematic, especially the review by the physician within 72 hours. Documentation by psychologists and pharmacists of their participation in the treatment planning process was frequently absent.

A major challenge for improving the documentation of nursing care is in the monitoring for side effects of medications. In this review 11 of 12 charts had no documentation of such monitoring. Nursing notes were generally very complete, describing in some detail the patients' behavior and interactions. However, notes concerning the effects of medications were lacking. It seems from this review many nurses are unclear about what is significant to chart.

As discussed in the results section, daily weights and intake and output flow sheets were not done. However, the audit revealed the nursing staff does monitor the percentage of meals eaten and the patients' elimination pattern. Weights are done on admission and then weekly. The monitoring of intake and output is more problematic. Some medications, such as lithium, require adequate hydration.

The teaching of signs and symptoms of when mental illness may be returning was lacking in the documentation of teaching activities. However, the documentation of teaching (other than medications) was found in the nursing notes. The lack of documentation from other disciplines may mean nursing is seen as having the responsibility for teaching. It is unclear if this means other professionals do not support the need to participate in documenting patient teaching or that other professionals simply do not chart their activities.

The last area for improvement relates to the discharge plan. The research literature and the expert panel clearly support the need to have the aftercare staff involved in the discharge planning. However, the compliance with these findings ranged from 58% to 50% respectively. This finding seems to support the notion that aftercare staff is frequently not involved in these interventions. The findings could also reflect the lack of appropriate administrative procedures in which aftercare staff is contacted prior to the patient's discharge. Also, the patient's caregiver or family member was involved with

the planning process in only 41% of the cases. This could mean these patients do not have caregivers and/or family. It may also reflect a lack of participation is a reflection of the inpatient staff to obtain input from families.

Nursing Issues

The RAND nursing recommendations are primarily related to assessments, medications, and the monitoring of the patient's physiological status. However, recommendations regarding psychosocial nursing interventions were missing. Research evidence to support these interventions with schizophrenia patients are rare. This is a significant limitation in the nursing literature.

Care Path Development

The findings of this records audit were shared with the mental health team responsible for the development of a coordinated care path to manage patients hospitalized with acute schizophrenia and with the behavioral health administrative group. The multidisciplinary team used the audit's findings in the development and refinement of the care path. The next challenge will be to evaluate how these interventions impact patient outcomes, in order to determine which interventions lead to improved patient outcomes.

Summary

This study offers important information regarding the standard of care provided to schizophrenic patients treated at one inpatient facility. The findings were particularly useful in the development of

a care path for this specific population. Areas for improvement identified in this research include medical tests, master treatment planning, documentation of care, patient teaching, and discharge planning. Given the limited health care dollars and the lack of a cure for schizophrenia, this research emphasizes the fact that treatment guidelines need to be aggressively tested as to their relevance to practice.

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Admissions, Length of Stay, and Discharge Barriers at the Hawaii State Hospital

Vijayalakshmy Patrick MD*, Earl S. Hishinuma PhD**, Bette Kavanagh ACSW***, George K. Makini Jr. MD****, Deborah Goebert MS*****, and Darryl Fernandes*****

Based on data gathered from patients, psychiatrists, and social workers at the Hawaii State Hospital, it was determined that the majority of patients had been in the hospital for more than one year, were committed for forensic reasons, and did not need continued hospitalization. An inter-agency systems approach is needed to address the issue of length of patient stay.

Introduction

On a national level, deinstitutionalization over the past three decades has forced state hospitals to discharge patients and downsize. Although state hospitals across the country have closed and innova-

tive community-based alternatives have been created, the remaining facilities continue to provide a place for the chronically mentally ill. These hospitals have played a variety of roles during this time (e.g., acute care facility, rehabilitation hospital, custodial care facility, forensic hospital, asylum, research and training institution, social control institution, and even a facility of employment).¹⁻³ Dependent upon the functions of the hospital and the diverse treatment approaches, patients' average lengths of stay have varied from several days to many years.

Although length of stay for patients at private psychiatric hospitals have been steadily declining, there has been little change at public institutions.⁴⁻⁸ In fact, the mean length of stay varies across hospital settings with a ratio of 16:1.⁹ Within the state (or public) hospitals, the percentage of patients with lengths of stay greater than one year ranged from 24-71% on any given day.^{2,4,8,10} Most studies have been limited to census data.

In their 1979 study on lengths of stay, Goldman, Taube, Reiger et al. reported that 80% of patients were released within three months of hospitalization.² The remaining 20% were then considered to be intermediate-stay patients. Approximately 15% of this 20% (or about 3% of the original sample), eventually became long-stay clients (i.e., remained for more than one year). However, on a given day in 1979, the researchers found that 20% of the patients were short-stay patients, 20% were intermediate-stay clients, and the remaining 60% were long-stay patients. Platman and Booker reported that approximately 15% of each cohort group that they studied were still hospitalized seven years after admissions.¹¹ These patients were difficult to place in the community and were unlikely to ever be discharged to an unsupervised living arrangement.

Several factors have been implicated in longer lengths of stay. Talbott and Glick found the following factors to be associated with longer lengths: (a) behaviors that could not be controlled on an outpatient basis, (b) unremitting psychosis, and (c) deficits that mandated a great deal of structure.¹² Allen, Coyne, and Logue found higher lengths of hospitalization for a personality-disordered group with treatment-resistant pathology and severely impaired impulse control.¹³ Other variables have been reported to increase length of stay, such as: medical comorbidity, prior hospitalization, availability of community resources, the commitment process, staff expectations, and utilization review criteria.¹⁴⁻¹⁸ Therefore, factors other than patient attributes also appeared to have an impact on length of stay.

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It has also been noted that many patients at state hospitals do not meet objective criteria for further hospitalization. In a 1966 study of a hospital in Texas, one quarter of the patients were considered suitable for release from institutional care, and almost a third for transfer to some other form of institutional care (e.g., nursing home).¹⁹ The remaining 43% were judged to be suitable for further care in state hospitals. A similar 1970 investigation of clients in a hospital in Washington DC, found that only 32% of the patients were considered suitable for further care in the hospital.²⁰ More than half were candidates for nursing-home or foster-home placement. The remaining 13% were considered dischargeable to live in an independent setting. In a more recent study published in 1996 by Fisher and his colleagues, census reduction was found to be related to community resources.⁸ However, these reductions were not sustained over time. Increases in patients with high-risk violent behaviors and a lower level of functioning as well as readmissions were documented over time. The challenges posed by these patients must be addressed before further deinstitutionalization occurs.

In summary, on a national level, there appear to be three groups of patients who occupy state hospital beds: (a) The "hard core" group consists of patients who are minimally responsive to treatment. These clients are unremittingly psychotic and their severe deficits require structured behavioral management and other interventions over long periods of time.^{12,21} (b) "Bed blockers" are long-stay patients who are deemed not in need inpatient care, but who remain hospitalized due to lack of adequate alternatives. These clients are clinically asymptomatic or have reached maximum benefit from hospitalization.^{11,22} (c) The "forensic" group consists of those who are committed to the institution by the courts and have lengthy stays because of delays by the legal system to release these patients, as only informally observed at the Hawaii State Hospital. This latter observation remains to be confirmed by systematic research.

The demarcation of these groups points to a central question: Are state psychiatric hospitals, and the Hawaii State Hospital in particular, being used in the most effective way to serve those in need? In order to begin to answer this question, more investigation is needed to delineate the reasons for increased lengths of stay and the obstacles to discharge for those who do not meet criteria for further hospitalization. The present study examines these issues utilizing data from the Hawaii State Hospital (HSH) that should have relevance to the site in question and should have implications nationally.

Purposes

Specifically, the purposes of the present study are as follows:

(a) Analyze the length of stay of patients at HSH based on the duration between the date of admission and a cut-off date at the time of data collection.

(b) Determine the proportion of clients who actually meet criteria for continued hospitalization and compare obtained figures to those reported previously. It is hypothesized that a large proportion of patients will be assessed not to be in need of continued hospitalization.

(c) Identify the obstacles for discharge for the patients who do not meet criteria to remain. Given the change in referral sources (see "Setting" section in Methods), legal barriers should be the most

common obstacle to discharge. However, this remains to be systematically studied.

(d) Describe the transitional placement needs for those who do not meet criteria for continued stay.

(e) On an exploratory level, examine whether there are variables that differentiate between patients who need to stay vs. those who do not.

Methods

Setting

The Hawaii State Hospital (HSH) is the only specialized, adult inpatient, public psychiatric facility for the entire Hawaiian Islands. The hospital admits and treats chronically ill patients. Prior to 1990, the hospital functioned as an acute care facility admitting individuals directly from emergency rooms of other hospitals. The lengths of stay during this time varied from a few days to years. However, after 1990, the admissions from emergency rooms ceased, and the hospital gradually downsized from 227 to 168 beds. At present, admissions come mainly from the correctional facilities and a few from psychiatric units of other general hospitals.

Subjects

Participants consisted of those who were inpatients at the HSH on December 15, 1996.

Procedures

Self-reported data on age, gender, and education were obtained from the patients' medical records. The number of hospitalizations included any prior admission to public or private psychiatric units in Hawaii. Legal status (i.e., voluntary, civil, penal commitment) was determined based on the intake information. Psychiatric diagnoses were also obtained from the records and involved the most recent assessment up to December 15, 1996.

The duration of stay was calculated by subtracting the admittance date from December 15, 1996, with the unit in years. It should be duly noted that the period computed reflected the length of stay only up until December 15, 1996. Therefore, a current patient with a duration of 0.2 years may have remained at the HSH for a much longer period of time before being discharged. Based on previous literature,² length of stay was categorized in three durations: less than or equal to 3 months; greater than 3 months but less than or equal to 12 months; and greater than 12 months.

The 13 attending physicians for these patients were interviewed and the basic question under study was, "Clinically, does this patient need hospitalization now?" If the response was "No," the question was asked, "If there were no obstacles, would you discharge him/her?" The latter question was used for confirmation purposes. The psychiatrists' criteria for continued hospitalization were: moderate to severe psychopathology, dangerousness, and/or need for 24-hour supervision. The corresponding criteria for discharge included the patient not being symptomatic and dangerous, being stable, and reaching maximum benefit from hospitalization.

For the patients who needed further hospitalization, the reasons for continued stay were documented. For those who did not meet the criteria for hospitalization, the obstacles for discharge were recorded. In addition, the psychiatrists were asked if the patient in question was compliant (primarily in reference to medication). The

Table 1.—Frequencies, Percents, and Confidence Intervals of the Obstacles to Discharge Based on Psychiatrists' Assessments (N=98)

Psychiatrists' Responses	Frequency	%	95% Confidence Interval
Obstacle to Discharge			
Legal	63	64.3%	54.4 - 73.1%
No appropriate outside facility	19	19.4%	12.8 - 28.3%
Patient refusal of discharge	18	18.4%	11.9 - 27.2%
Institutionalization	8	8.2%	4.2 - 15.3%
Non-compliance and prone to relapse often	8	8.2%	4.2 - 15.3%
Drug abuse and becomes symptomatic often	7	7.1%	3.5 - 14.0%
Objection by family	7	7.1%	3.5 - 14.0%
Objection by care home	4	4.1%	1.6 - 10.0%
Inability to care for self	3	3.1%	1.0 - 8.6%
Objection by community mental health clinic	2	2.0%	0.6 - 7.1%
Objection by community	1	1.0%	0.2 - 5.6%

Note: Psychiatrists provided more than one obstacle for some patients.

Table 2—Frequencies, Percents, and Confidence Intervals of Social Workers' Evaluation of Transitional Placement Needs for Patients Determined by Psychiatrists Not to be in Need of Hospitalization (N=98).

Social Workers' Responses	Frequency	%	95% Confidence Interval
Transitional Placement Needs			
Adult residential care home	27	27.6%	19.7 - 37.1%
Transitional living unit	19	19.4%	12.8 - 28.3%
Long-term care and custody; 24-hour supervision	18	18.4%	11.9 - 27.2%
Psychiatric intensive care facility	15	15.3%	9.5 - 23.7%
Substance abuse treatment facility (Oxford House)	7	7.1%	3.5 - 14.0%
Family	6	6.1%	2.8 - 12.7%
Independent living	5	5.1%	2.2 - 11.4%
Special nursing facility	1	1.0%	0.2 - 5.6%

Note: The sum of the frequencies equals exactly 98 because only one transitional placement need per patient was elicited from the social workers.

social workers were interviewed to determine the patient's placement need.

The mean, range, and standard deviation were determined for the lengths of stay of patients at HSH. A chi square analysis was conducted on the frequency breakdown of the patients falling into the three lengths-of-stay categories. The same type of analysis was done for the frequency distribution for legal status. A frequency table (which included the percents and confidence intervals) was generated for the psychiatrists' evaluation of the obstacles to discharge. Similarly, the social workers' responses were presented in a frequency table that included percents and confidence intervals. The remaining analysis consisted of comparing patients who needed continued hospitalization vs. those who did not, on several dimensions: age, number of hospitalizations, categorical duration of stay, gender, legal status, educational attainment, medication compliance, and psychiatric disorders. Where means were involved, t-tests were performed, and where frequencies were the dependent measures, either chi square or logistic regression analyses were conducted (dependent upon the incidence rate of the targeted measure).

Results

A total of 163 subjects were studied and the mean age of these participants was 44.4 years with a range of 21 to 86 years of age. There were 140 (85.9%) males and 23 (14.1%) females. For individuals who reported their educational attainment, 54 (34.8%) did not graduate from high school, 75 (48.4%) graduated from high

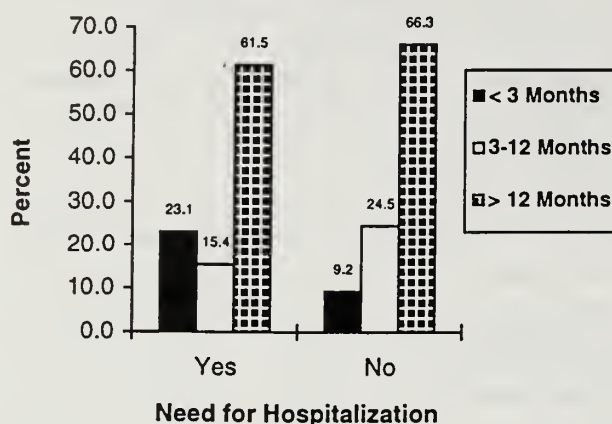
school but did not attend college, and 26 (16.8%) had at least some years of college education. The mean number of previous psychiatric hospitalizations was 5.1 (range = 0 to 39; *sd* = 5.6).

The average duration of stay for the 163 patients (on December 15, 1996) was 3.6 years (range = 0.1 to 22.9 years; *sd* = 4.4 years). Twenty-four patients (14.7%; 10.1-21.0% = 95% confidence interval) had lengths of stay less than or equal to 3 months (short stay), 34 (20.9%; 15.3-27.7% = 95% confidence interval) had stayed greater than 3 months but less than or equal to 12 months (intermediate stay), and 105 (64.4%; 56.8-71.4% = 95% confidence interval) had been hospitalized for greater than 12 months (long stay). The differences between these three groups were statistically significant ($X^2 = 71.8$; *df* = 2; $p < .001$) and indicated that the majority of patients were at the HSH for more than one year.

In examining legal status, the following distribution was obtained: Forty-one patients (25.2%; 19.1-32.3% = 95% confidence interval) were voluntary, 6 (3.7%; 1.7-7.8% = 95% confidence interval) were under involuntary civil commitment, and 116 (71.2%; 63.8-77.6% = 95% confidence interval) were penal. This latter group included those who were admitted for psychiatric evaluations or assessments for fitness to proceed, those acquitted but still committed, and those whose conditional releases were revoked. The proportions were found to be significantly different ($X^2 = 116.4$; *df* = 2; $p < .001$) whereby most patients were penal.

Of the 163 patients, the psychiatrists stated that only 65 (39.9%; 32.7-47.5% = 95% confidence interval) met clinical criteria for continued hospitalization. Conversely, 98 (60.1%; 52.5-67.3% = 95% confidence interval) did not need hospitalization.

Fig 1.— Percent of Patients By Length of Stay For Each “Need for Hospitalization” Group



Note: $n = 65$ for “Yes” for Hospitalization; $n = 98$ for “No” for Hospitalization; $\chi^2 = 6.8$; $p < .04$; $df = 2$.

Table 1 presents the results on the obstacles to discharge for those who did not need hospitalization. Legal status/commitment was by far the most common barrier with a rate of 64.3%. The second and third most frequent obstacles were, “no appropriate outside facility” (19.4%) and “patient refusing discharge” (18.4%).

Table 2 reports the findings of the interviews with the social workers on their assessment of the transitional needs of the patients. Adult residential care home (27.6%), as a placement alternative, was selected most often followed by long-term care/custody (24-hour supervision; 18.4%).

Among the eight demographic variables that were examined in relation to the need for hospitalization, three were statistically significant. In general, there were higher proportions of patients in the “>3 months, but < 12 months” (intermediate stay) and “>12 months” (long stay) categories for those who did not need hospitalization as compared to those who did need hospitalization (see Figure 1).

Table 3 reports the results on the relationship between the need for hospitalization and several other variables. An overall higher education level was found for those not in need of hospitalization than for those who needed continued stay. There was a higher proportion of patients deemed to be compliant and not needing continued hospitalization in comparison to those needing hospitalization.

In examining the 17 diagnoses, only one comparison was statistically significant. The prevalence rate of medical disorders for those who did not need hospitalization (16.7%) was higher than for those who did need hospitalization (4.8%). The medical disorders included diabetes, brain injury, hypertension, chronic obstructive pulmonary disorder, and seizure disorders. However, given the relatively high number of comparisons made for the different diagnoses, it cannot be ruled out that this significant finding involving the medical disorders was due to chance.

Discussion

The average length of stay for patients at the HSH was 3.6 years.

However, this figure may be misleading in that it is unduly affected by a small percentage of patients with very lengthy hospitalizations. In addition, the 3.6 years per se does not answer the previously posed question, “Are state psychiatric hospitals, and the HSH in particular, being used in the most effective way to serve those in need?” However, further analyses revealed that the typical profile of a patient at the HSH was one who had a length of stay greater than one year (64%), was committed for forensic reasons (71%), and was evaluated by psychiatrists as not needing continued hospitalization (60%). In general, these results were consistent with the hypotheses put forth and with previous findings.^{12,19}

It can be reasonably inferred that the high percentage of penal patients was due to the criminal justice system becoming the main source of referral and admission. Being the only public institution in the state, this hospital may be converting to a forensic hospital even though facilities are available to treat the mentally ill in the prison. For example, evaluation for fitness to proceed could take place at the prison level prior to admittance to the HSH. The high-profile murderers and rapists were included in this group and, based on first-hand knowledge, some of them did not meet clinical criteria for continued stay. However, conditional releases were being denied by the courts. Therefore, it would appear that other criteria (e.g., social control) were being considered in the decision making rather than mental health status for both admittance and conditional release.

Another potential factor should also be considered when examining the forensic patients. It is possible that in order to gain admission to this facility, the mentally ill could have been criminalized (i.e., arrested for misdemeanors and transferred to the state facility).²³ Further research is needed to ascertain the degree to which this may be taking place, and subsequent interfacing will likely be needed between agencies (i.e., hospital, prison, courts).

The 40% of the patients considered to meet continued stay criteria were the “hard core” group who continued to be symptomatic, dangerous, treatment resistant, and/or needing continued structure. These patients were not capable of being managed in psychiatric wards of other general hospitals or in private hospitals because of restrictions on lengths of stay by managed care. Appropriately therefore, these patients should be managed and cared for at the state hospital.

Nearly two-thirds of those deemed not in need of continued hospitalization, were the “bed blockers.” They did not meet clinical criteria for continued stay in the hospital, but continued to stay longer for other reasons. The three main obstacles for discharge identified in this group were legal barriers, no outside facilities for placement, and patient refusal. The legal barriers that contributed to longer lengths of stay included delays in scheduling court hearings and inability to apply for conditional release for another year if it was denied at the hearing. Further, a few of these patients became symptomatic when attempts were made to return them to the court for trial. These patients, especially those who were sent for assessments for competency to stand trial, may have been trying to avoid being sentenced. Another factor that should be considered that may have contributed to the length of stay was the overall positive aspects of the HSH (e.g., nonthreatening environment, phone usage, allowance of “street clothing,” potential for job and nominal income).²⁴ Perhaps from a therapeutic view, the outcome of being in such an environment relative to that outside of the HSH should be considered.

Table 3.— Tests of Significance Comparing Need for Hospitalization Across Several Variables.

Variables	Need for Hospitalization		Statistical Tests
	Yes ^a	No ^a	
Age (mean)	4.3 (<i>sd</i> =11.9; <i>n</i> =65)	45.1 (<i>sd</i> =14.1; <i>n</i> =98)	<i>t</i> =0.9; <i>p</i> > .05; <i>df</i> =161
Number of Hospitalizations (mean)	4.9 (<i>sd</i> =4.6; <i>n</i> =61)	5.3 (<i>sd</i> =6.2; <i>n</i> =91)	<i>t</i> =0.4; <i>p</i> > .05; <i>df</i> =150
Gender (frequency)			χ^2 =0.7; <i>p</i> > .05; <i>df</i> =1
Males	54 (83.1%)	86 (87.8%)	
Females	11 (16.9%)	12 (12.2%)	
Legal Status (frequency)			χ^2 =5.2; <i>p</i> > .05; <i>df</i> =2
Civil commitment	5 (7.7%)	1 (1.0%)	
Voluntary	17 (26.2%)	24 (24.5%)	
Penal	43 (66.2%)	73 (74.5%)	
Educational Attainment Level (frequency)			χ^2 =6.2; <i>p</i> < .05; <i>df</i> =2
Less than high school	23 (36.5%)	31 (33.7%)	
High school diploma or G.E.D.	35 (55.6%)	40 (43.5%)	
At least some college	5 (7.9%)	21 (22.8%)	
Medication Compliant (frequency)			χ^2 =13.9; <i>p</i> < .001; <i>df</i> =1
Not compliant	21 (32.3%)	9 (9.2%)	
Compliant	44 (67.7%)	89 (90.8%)	
Psychiatrist Diagnoses (frequency) ^b			
Alzheimer's disease	1 (1.6%)	3 (3.1%)	χ^2 =0.4; <i>p</i> > .05
Bipolar disorder	7 (11.1%)	11 (11.5%)	χ^2 =0.0; <i>p</i> > .05
Dementia	3 (4.8%)	6 (6.3%)	χ^2 =0.2; <i>p</i> > .05
Depression	0 (0.0%)	1 (1.0%)	N.A. ^d
Delusional disorder	4 (6.4%)	3 (3.1%)	χ^2 =0.9; <i>p</i> > .05
Impulse control disorder	0 (0.0%)	1 (1.0%)	N.A. ^d
Generalized anxiety disorder	1 (1.6%)	0 (0.0%)	N.A. ^d
Medical disorder/disease	3 (4.8%)	16 (16.7%)	χ^2 =5.7; <i>p</i> < .02
Mental retardation	2 (3.2%)	5 (5.2%)	χ^2 =0.4; <i>p</i> > .05
Organic mood disorder	0 (0.0%)	1 (1.0%)	N.A. ^d
Personality disorder	0 (0.0%)	1 (1.0%)	N.A. ^d
Psychotic disorder	4 (6.4%)	2 (2.1%)	χ^2 =1.9; <i>p</i> > .05
Post-traumatic stress disorder	2 (3.2%)	1 (1.0%)	χ^2 =0.9; <i>p</i> > .05
Schizophrenia	42 (66.7%)	63 (65.6%)	χ^2 =0.0; <i>p</i> > .05
Sexual disorder	4 (6.4%)	2 (2.1%)	χ^2 =1.9; <i>p</i> > .05
Substance abuse	31 (49.2%)	39 (40.6%)	χ^2 =1.1; <i>p</i> > .05
Dual diagnosis (substance abuse & at least one other diagnosis)	31 (49.2%)	34 (35.4%)	χ^2 =3.0; <i>p</i> > .05

^a *N* sizes are not identical to that previously reported because not all data were available for each subject. Percents are based on column figures.

^b *N* size of "Yes" was 63; *N* size for "No" was 96; *df* = 1.

^c Logistic regression analyses were performed for these comparisons given the low incidence of the respective psychiatric disorders.

^d N.A. = Not applicable; too few occurrences for meaningful statistical analyses.

Lack of appropriate outside facilities to place these patients was listed as the second most frequent obstacle, and support for this contention was provided by the social workers' assessment of the need for alternative transitional placements. Community placements in Hawaii include half-way houses, care homes, oxford houses, independent living quarters subsidized by the state, and in some cases the families of the patients. However, facilities for intensive long-term care and custody are not available to house and treat the seriously mentally ill. Even though four cottages have been opened on the HSH campus, which function as transitional units, there are not enough facilities to meet the demands and even when openings are available, placements may not occur for legal reasons or because of patient refusal.

The latter, patient refusal, was the third most common obstacle. These patients, though stable and capable of caring for themselves, refused outside placement or became anxious

and sometimes aggressive when attempts were made to transition them. Our findings compare with Trieman and Leff's study where 17% of their group consistently rejected any suggestion of leaving the hospital.²⁵ However, Lamb and Peele suggested that many chronically mentally ill clients cannot meet simple demands of living even with long-term rehabilitation.²⁶ Many are unable to withstand the stress, and are apt to develop incapacitating symptoms when confronted with a relatively common life crisis.

Amongst the variables examined, age, number of previous hospitalizations, gender, and legal status did not differentiate those who needed hospitalization versus those who did not. However, the duration of stay was significantly longer for those who did not meet criteria to stay. It is therefore evident that the HSH was unable to discharge patients in a timely manner after stabilization of acute symptoms. It is also of interest to note that this group of patients was more compliant with medication and had a higher educational level than those who met criteria for hospitalization. Our findings were also consistent with other studies that found comorbidity of medical disorders prolonged length of stay. However, this should be cautiously interpreted in the present study because of the number of comparisons examined (i.e., 17 psychiatric diagnoses).

Effective and efficient provision of services at the HSH would benefit other individuals and institutions. Those in need of treatment would be served, there would be a decrease in the waiting list to enter the hospital, the population of the homeless mentally ill would decrease, and there would be less burden on the community mental health clinics to care for the increasingly symptomatic mentally ill.

The ramifications of the criminal justice system being the primary referral source and the resulting increase of the forensic population need to be considered both in short- and long-term planning for the hospital. If court hearings and three-panel (court-appointed independent) examinations could be expedited within the judicial system, the lengths of stay of court-committed patients who do not meet clinical criteria to stay, would decrease. So as not to jeopardize public safety, consideration could be given to an alternative 24-hour facility to house and monitor high-profile criminals who are psychiatrically stable.

Aggressive planning and policy changes within the hospital should take place to decrease lengths of stay. There should be education and training of staff to work with patients toward discharge as soon as acute symptoms improve and to change the culture of providing custodial care and nurturance, to one of teaching patients skills for independence and survival.

Legislative funding to increase transitional facilities in the community is needed. Training care home operators to care for the mentally ill who are elderly, medically compromised, or who have other special needs may increase discharge options. Providing incentives (e.g., free training) may also foster these developments and decrease long-term care.

Limitations

Limitations of this study include the possibility that the practice patterns of the 13 psychiatrists who treated the patients may have influenced the decisions about discharge. Some may have discharged patients as soon as the clients did not meet criteria for continued stay, and other psychiatrists may have believed in providing asylum for these patients. These differences could have affected the lengths of stay in divergent ways.

In addition, the present investigation defined length of stay based on the same cut-off date for all patients rather than on tracking each patient and determining the length of hospitalization as a function of the actual discharge date. Therefore, lengths of stay based on this study should be considered conservative measures. However, the advantage of using such a cut-off date is that there would be greater consistency and reliability in the psychiatrists' evaluation of the need for patients to remain hospitalized, and for social workers' assessment of alternative transitional placements.

Summary

Despite the limitations above, the overall findings of the present study support previous research in Hawaii²⁷ and in other states and have important implications for institutions in Hawaii. In order to maximize effective services for the mentally ill and benefit other individuals and institutions, an inter-agency approach is needed. Further inquiry and research are also necessary in many areas. What are the criteria or factors that determine whether criminally insane individuals are to be placed in a state psychiatric institution or the prison system? Is a segment of the mentally ill being criminalized in order to be admitted to the HSH? How should patients who essentially refuse discharge be addressed? How are these issues similar and dissimilar to other public psychiatric hospitals? Are other states with public psychiatric hospitals also becoming more forensic, and what is the impact of this on the mentally ill homeless population?

How these issues are dealt with and addressed will greatly affect the care and services of the mentally ill in Hawaii, and nationally. An

aggressive approach is needed to decrease lengths of stay to serve more patients in need of hospitalized psychiatric care.

Acknowledgements

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Life in These Parts

Plastic surgeon **Benjamin Chu** saw a dozen women who needed correction of cosmetic facial surgery performed by a "Doctor from Korea." Narcotics investigator Ed Howard found and reported, "She's a medical receptionist in Seoul who learned how to do it by watching the doctor she worked for." Ben says, "Overall it's pretty sloppy work. Some had bad scars or extremely uneven eyelids. Many had silicone injected in their lips, cheeks and around their eyes." State narcotics investigators halted the underground operator with a drug bust on a Pawaa area apartment. A 54-year-old woman, allegedly performing the surgeries, was issued a citation ordering her to cease operations and fined only \$500 because "she was doing the procedures on people with their consent," according to Sharon On Leng of the state Regulated Industries Complaints Office. Ed Howard says, "The woman arrived in Hawaii on March 8 and was scheduled to return to Seoul April 1. She was booked everyday while here (doing several surgeries daily). The cash-only price for eyelid surgery was from \$600 to \$800 while a face lift cost \$1,100 to \$5,000. The clients were Korean women. And this has been going on for a long time, at least 4 years or longer."

Vivian Ho, president and CEO of Queen's International is the first person from Hawaii to be honored by the Health Care Forum as a 1998 International Emerging Leader in Health Care for promoting the state's health and wellness tourism industry. The Health Care Forum is a 10-year-old international educational organization based in San Francisco.

Vivian says, "tourism and health care are the two largest industries in Hawaii."

Queen's International is a first tier subsidiary of the Queen's Health Systems which works with health care and visitor industries to bring patients and health visitors from Asia/Pacific.

Eye Opening Colombian Trip

(Sharon Lipton Mid Week Apr 23 issue)

Steve Friedman, SFH ER physician leads groups of Hawaii folks every month to **Dr Virgilio Glavis'** mountain outpost (an hour from Bogota Columbia) for Lasik surgery.

The world reknown 51-year-old Glavis has done over 6,000 procedures using the 10-minute Lasik procedure to treat near and far sightedness and astigmatism. PRK is passe in Columbia. The Lasik procedure uses a highly advanced narrow beam German manufactured excimer laser which creates precise results and involves laser tracking technology. Even local physicians have gone for treatment viz a prominent Honolulu eye surgeon and OB man **Francis Terada** who gained 20/20 vision for his 70th birthday and was able to discard his thick myopic glasses.

Ciguatera Fish Poison Kits

While **Y. Hokama** (UH Med School professor

of Pathology) did the original research on ciguatera toxin back in 1974 and developed free initial test kits, now a new commercial test kit for ciguatera toxin has been developed and marketed by Ocean Test Systems. Cigua-Test costing \$23 to \$30 for 5 applications tests for toxicity in Ulua, Palani, Barracuda, Papio, Wrasse and other suspect fish in these tropical regions.

Latest Procedure for Snoring

Maui oral surgeon **Michael Clark** is the first in Hawaii to offer Somnoplasty (approved in July by FDA) for turbinate reduction. The equipment costs \$50,000 and the patient pays \$1,950 for three treatments. The procedure takes 15 minutes and involves a local anesthetic and insertion of a probe behind the soft palate. A very low energy, low temperature radio frequency shrinks and stiffens the tissue. The patients are able to return to work immediately with minimal pain.

Till now, LAMP (Laser assisted uvuloplasty) has been the primary procedure for snoring, but is quite painful and requires a longer recovery period.

Worker's Comp Crisis

(Beverly Creamer, Honolulu Advertiser, Sunday Apr 19)

In 1995, the state Legislature made sweeping changes in worker's compensation primarily by cutting fees to specialists. While employers' cost of worker's comp insurance dropped, Hawaii saw an 11% decline in the number of orthopedic surgeons and lost a good many physical therapists as a result. Physicians say the headaches of dealing with the massive paper work required and the low fees, just aren't worth it.

Len Howard, HMA president said, "This is not a case of the greedy physician who wants to make more money. This is about those who ultimately suffer the most—the injured worker. Physicians are being forced to curtail the number of injured workers they treat in order to stay in practice. The medical fee schedule doesn't even cover the cost of providing care."

But law makers maintain the reforms are working well and have saved Hawaii employers \$100 million in the past two years.

Miscellany

(Laughter The Best Medicine)

God and St. Peter were playing a round of golf. On the first hole, God drives into the water. The waters part and God chips onto the green. On the second hole, God takes a tremendous whack and the ball lands ten feet from the pin. An earthquake causes part of the green to rise and the ball rolls into the cup. On the third hole, God lands in a sand trap. He creates life: single cell organisms develop into fish; then into amphibians which evolve into reptiles; then into birds, and finally into furry little mammals. One of the mammals run into the trap, grabs God's ball in his mouth, scurries over and drops it in the hole. St. Peter looks at God and says, "You gonna play golf or you gonna fool around?"

Conference Notes "Panic Disorders"

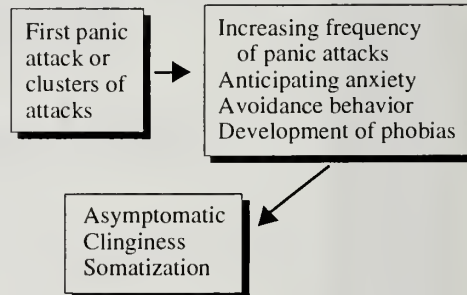
(Psychiatrist **Javaid Sheik** from Stanford Medical School, Apr 2 '98, Sponsored by Pfizer)

Panic Disorders: Definition: Recurrent, unexpected panic attacks, occurring at least once a month and a/c persistent anxiety.

P.D. Symptoms: (At least four of the following)

- SOB, smothering sensation
- Dizziness, unsteadiness, or faintness
- Palpitations or tachycardia
- Trembling or shaking
- Sweating
- Choking
- Nausea or abdominal distress
- Depersonalization
- Paresthesias or numbness
- Flushes or chills
- Chest pain or discomfort
- Fear of dying
- Fear of going crazy

Development & Progression P.D.



Prevalence of P.D. & Medical Utilization:

- a. 30-50% of pts with recurrent chest pain;
- b. 1.6-2% of general population;
- c. 13.3% of primary care pts;
- d. P.D. pts make 12.6 times more ER visits

P.D. Disabilities:

- Higher risk of HTN (1.91), MI (4.54) and CVA (4.95)
- Risk of psychiatric comorbidity
- High rate of unemployment

P.D.: Lifetime 2% chronic long term disorder with excess morbidity.

Goals of Acute Therapy:

- a. Block P.D.;
- b. Block anticipatory anxiety;
- c. Extinguish avoidant behavior;
- d. Restore normal functioning

Drugs for P.D.

Antidepressants:

- a. SSRI's
- b. Tricyclics
- c. MAOIs

Benzodiazepines:

a. alprazolam or clonazepam
(Xanax) (Klonopin)

Other Agents:

- a. Combined treatments
- b. Anticonvulsants, H2 Blockers

Anticholinergic Cardiac Cognitive Dependence Withdrawal
Toxicity Impairment

SSRI	+	-	+	-	+
Benzodiazepam	-	-	++	+++	+++
Tricyclics	+++	++	+	-	+

SSRI's more effective than imipramine and alprazolam
(Tofranil) (Xanax)

Sertaline in P.D.
(Zoloft)

Start with 25 or 12.5mg/d and after 1 week
increase to 50 or 100mg/d

SSRI's: Starting Doses Maintenance Doses

Fluoxetine (Prozac)	5mg/d	20-80mg/d
Fluvoxamine (Luvox)	25mg	50-300mg
Paroxetine (Paxil)	10mg	20-50mg
Sertaline (Zoloft)	25mg	50-200mg

Failure Reasons in P.D. Therapy:

- a. Inadequate dose or length of Rx;
- b. Comorbid conditions;
- c. Environmental stresses;
- d. Misdiagnosis

P.D. Conclusions:

- a. Chronic disabling condition;
- b. Pts have high medical utilization rates;
- c. Medical and psychiatric comorbidity common
- d. SSRI's are first line of therapy
- e. Combination Rx with Benzodiazepam or with cognitive behavioral therapy

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Misc.

Mask & Glove Relief.—Sensitivity barrier gel reduces irritation from latex, nitrile, polyethylene face masks & gloves. Free evaluation sample to USA physicians (1 per office). Sahara Cosmetics Oahu 808-735-8081, USA toll free 1-877-280-2020, record complete delivery address.

Announcement

Idyllic Maunaloa, Molokai.—New medical facility for future clinic. Generous rent concessions for operator offering basic medical services for growing small town community. Call Molokai Ranch Land Co. 1-800-254-6256.

Seeking Applicants.—Associate Director of Trauma, The Queen's Medical Center. Applicants must be board certified/eligible in General Surgery and have completed a Surgical Critical Care Fellowship. Direct CV and inquiries to: Gail Tominaga, MD, Medical Director of Trauma, The Queen's Medical Center, 1301 Punchbowl St., Honolulu, HI 96813. Ph (808) 547-4557 Fax (808) 547-4646.

New Office.—Kristi Adachi MD is pleased to announce the opening of her new office at Queens POB I, 1380 Lusitana St., Ste. 502, Honolulu, HI 96813. Specializing in Head and Neck Oncology, Obstructive Sleep Apnea and Sinus Disease. Ph (808) 533-0711 Fax (808) 538-6763.

Open Position for Physician.—Pacific Isle, 100 people, ACLS Cert., July-Feb 1998. \$85k pkg. Spouse ok. 531-4891.

Parkinson Disease Support Group.—Windward area, held bi-monthly the 3rd Friday of every month. Aug. 21, October 16, December 18, 1998. Feb. 19 and Apr. 16, 1999. Castle Med Ctr, Kailua, Pikake Room.

Office Space

Pearl City Business Plaza.—Tenant Improvement Allowances for Long Leases; 680+ sq ft; 24-hr security; free tenant/customer pkg; Gifford Chang 581-8853 DP, 593-9776, 531-3526.

Hilo Medical Office Space.—Largest Specialist office ideal for ENT, Neurologist, Orthopedics, Gastroenterologist, Podiatrist, Operating Suite on Premises. Will trade for office time in Honolulu or rent/very flexible. Contact Pacific Surgical Associates Inc. 1-808-961-3330.

Pediatrician's Office.—(Ground floor of Aiea Medical Bldg.) Wants a specialist to share the space with flexible arrangement. Call 488-6846.

Dr's Office Space Sharing.—M thru S, 8 am to 1 pm. Family, General Med., Psychiatrist, Ala Moana Bldg. 805, 941-3997.

Locum Tenens

Board Certified family practitioner.—Available for short term practice coverage. Liability insurance provided. Please contact: V. Braslavsky, MD (913) 383-3285. <http://www.concentric.net/~locumdr/1.htm>.

Locum Tenens available.—Board-certified Family Practice, 14 yrs clinical experience in Hawaii. Office coverage, Deborah C. Love MD: home Oahu: (808) 637-8611; cell ph: (808) 295-2770.

For Sale

For Sale.—Full size, upright clinical weight and height scale/balance, white, \$100. Pediatric scale/balance, \$100. EKG machine, single channel, \$100. Baumanometer desktop mercury sphygmomanometer, \$50. Lanier multi-station remote dictation system, \$200. All good condition. Contact Ernie at 831-3000.



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Statistics are a highly logical and precise method for saying a half-truth inaccurately.

Bureaucrats have a strange way of examining data. The Medicare Payment Advisory Commission (MedPac) showed heavy interest in the variations in payments for cataract surgery across settings. The commissioners noted that cataract surgery accounts for 35% of ambulatory surgical center (ASC) volume, and were concerned with the dollars going to ASCs, and the fact that they are physician-owned. The commissioners should be delighted with that volume, and should encourage even more surgery in ASCs. What should be the over-riding fact is that statistics have established that free-standing ASCs deliver the same or better care than hospital facilities with greater ease and comfort for both doctor and patient. Most importantly, they do so at a considerable savings for patients and third parties. It would be instructive for the commissioners to see a dollar figure of the savings to Medicare provided by that 35% with a comparison to the same services in a hospital. This is data which hospitals do not want disseminated.

But what if I only do this until I need dark glasses?

Every silver lining must have a cloud, and now it seems that the cloud in clinical use of *Viagra* is retinal dysfunction. Side effects described by some patients include a bluish color perception change and light sensitivity. In one study, electrical measures of retinal function dropped by 30-50%, and were still apparent up to 5 hours after taking the drug. So far, only a moderate percentage of users have reported any visual symptoms, and there is no indication of permanent change. Still, it seems wise to minimize the dose level for men with macular degeneration or pigmentary degeneration of the retina. At present, the FDA recommends an average dose of 50 mg. (per day? per week? per interlude? per loin?)

This administration has the integrity of a hyena and the style of a poison toad.

There is no limit to the level of harassment being heaped upon those who provide Medicare coverage. The latest budget proposal is a "user fee" which would shift more than \$660 million in Medicare administration costs to physicians, hospitals and other providers. In Hawaii we already provide 4% to the state tax coffers for the privilege of serving our patients, now Medicare has proposed to add the following:

1. Require physicians to pay \$100 to initially enroll in Medicare and \$25 every 5 years to re-enroll.
2. Subtract \$1 from payments on any claim that is not submitted electronically.
3. Charge providers a \$1 fee for submitting duplicate unprocessable claims (it is often necessary to file two or even three forms to get a response.)

The AMA strongly opposes this imposition of a new tax on physicians under the inane guise of a "user fee." Come on, people, this is a real and extremely important issue, so take a few minutes to contact our four entrenched Democrat Congresspersons and tell them of your opinions about this additional unfair burden. There can really be no doubt about the determination of this administration to break the back of the private practice of medicine.

Guns don't kill people—

The U.S. rate for firearm deaths in 1994, including homicides, suicides and accidents, was 14.24 per 100,000 people, the highest of the world's 36 richest nations. Japan claims the lowest rate at 0.05 per 100,000, or to put it another way, one firearm death in Japan equals 285 deaths in America, the freedom-loving land of amber waves of guns. It is easy to understand the uncertainty and fear of government tyranny prevailing in the authors of the second amendment, and their necessity for a well-armed state militia. The tragedy of the amendment is that by extension we now have street gangs with automatic rifles, freeway crazies with 9 mm hand guns, school children gunning down teachers and classmates, and disgruntled employees blowing away bosses and co-workers. Some inner cities have become war zones. The argument is made that this is part of the price we pay for freedom, but no one can refute the fact that too many Americans reach for firearms as a solution for everything from domestic squabbles to maintaining a drug habit. It is pretty scary out there.

The function of socialism is to raise suffering to a higher level.

An additional insult to Medicare people is the prohibition on paying for medical care with their own money. A 65-year-old man with severe emphysema wanted to undergo lung volume reduction surgery. He was informed by Medicare that the surgery was characterized as "experimental" and Medicare would not pay. That was okay with the patient, and he made arrangements to pay the bill himself, however, he could not. The physician refused because if he provided the care he would be accused of Medicare "fraud." The penalties include fines and a ban on caring for Medicare patients for two years. If a bureaucrat decides that a given treatment is experimental, or too expensive, or unnecessary, payment can be denied. Senator Kyl (R-Arizona) offered an amendment to Title 4, Section 4507, which would guarantee a patient's right to pay directly for care. The bill was promptly passed by the Senate, but killed by President Clinton. The United Seniors Assn. sued the government last December over this issue, but DC Judge Thomas Hogan dismissed the suit with the statement that the plaintiff's had "not demonstrated that they have a constitutional right to privately contract with their physician." This stands Article X of the Bill of Rights on its head, which says that "The powers not delegated to the United States by the Constitution....are reserved to the States, respectively, or to the people." What nation are we in, anyway? An appeal is planned.

As to the value of advertising motivating people, remember the Edsel.

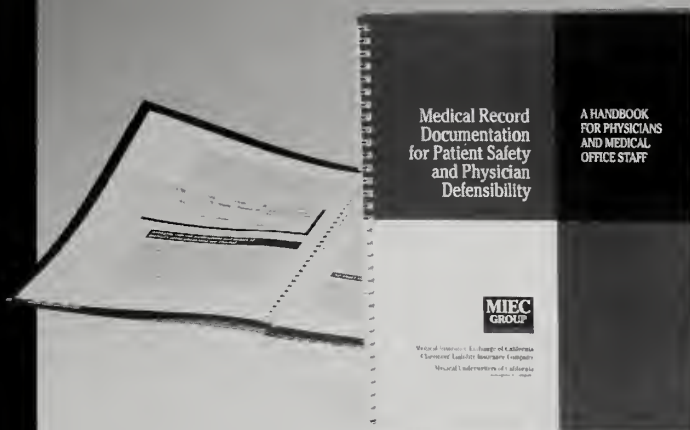
Wesley Jessen VisionCare Inc., must stop making claims about the health benefits of its UV-blocking contact lenses, according to the Food and Drug Administration. Advertisements placed on the Internet and in a contact lens magazine implied that the contact lenses protect the wearer from up to 95% of ultraviolet rays, and promoted the lenses as a substitute for sunglasses. Although the company included a disclaimer stating that the lenses have not been proven, the FDA claims the overall message would make consumers think the lenses could be used for that purpose. Wesley Jessen VP Tom Steiner said they stopped distributing the material, and the company still hopes it will be able to cite studies that support its claim that UV protection in lenses has some benefit.

They are mad as hell, and doing something about it.

A new chapter in the turmoil in health care is emerging in Denver where a group of 70 physicians purchased an abandoned Catholic hospital and plan to refurbish and reopen it as a 60 bed boutique hospital. There is no intent to provide expensive loss-producing services such as emergency rooms, trauma teams or complex and expensive surgical procedures. Instead, the hospital called *Precedent*, will focus on outpatient surgery, pricey imaging tests, short stays and maternity care. The doctors, largely refugees from one of the half-dozen hospitals in the market owned by Columbia/HCA, promise high quality with highly trained RN nurses at a one nurse to five patients ratio (Columbia, one to eight, often LPNS). They plan private rooms, VCRS, voice mail, and data ports. Tired of being abused by the restrictions and reduced income imposed by the big chains and managed care, the physicians are risking it all with a combined \$1.5 million and a pledge of their practices as collateral to borrow the rest. Columbia/HCA has two hospitals nearby with Rose Medical Center and St. Luke's, and they are already in an attack and destroy mode. Columbia is threatening doctors with loss of positions or staff privileges, and lobbying insurers and HMOs to refuse to sign coverage contracts. Columbia wants to kill this competitive upstart before it can prove its merit.

Addenda—

- ❖ Your mouth produces a quart of saliva every day.
- ❖ You have to walk five miles to burn off the calories from a single hot fudge sundae.
- ❖ Internationally, Baywatch is the most popular TV show in history.
- ❖ The Eiffel Tower is the Empire State Building after taxes.
- ❖ Is it true that our President wants to merge Air Force One with Virgin Airlines? Aloha and keep the faith—rts ■



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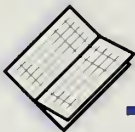
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HAWAII MEDICAL JOURNAL

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Maui Snaring the Sun

The demi-god Maui is said to have slowed the sun to its present pace.
He also performed many other fantastic feats.

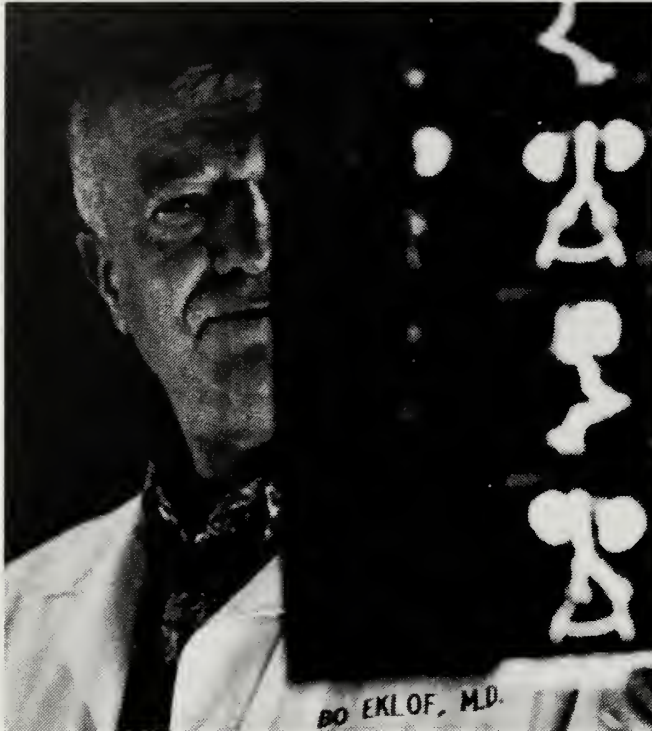
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Correction

Please note that the HEPA ad printed in our July 1998 issue on page 567 had the incorrect year and has been corrected in this issue on page 590. We apologize to HEPA for the error.

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– Friday Noon Conference –

Fat Embolism Syndrome

*Jerry E. Prentiss, MD, Brian T. Sinclair, MD
& Lynn Madanay, MD*

August 7, 1998, 12:30 – 1:30 p.m.

Doctor's Dining Room

Learning Objectives

At the conclusion, participants will be able to:

- Understand pathophysiology of fat embolism syndrome.
- Recognize imaging patterns for fat embolism syndrome.
- Correlate nuclear medicine studies—single photon emission and computerized tomography

– Friday Noon Conference –

Stroke Prevention with Anticoagulation Program at Straub

*Roger L. White, MD, Jan Scura
& Geri Kimura, PharmD*

August 21, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants will be able to:

- Explain the risk factors for stroke and the therapeutic options for stroke prevention.
- Describe the need for and the benefits of an Anticoagulation Program to both the patient and the physician.
- Summarize the process of enrolling and maintaining a patient in the Anticoagulation Program.

– Friday Noon Conference –

What's New With HMO's?

Ronald H. Hino, MD, & Deb Stampfle

August 28, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants will be able to:

- Understand the utilization process employed by the HMO department.
- Recognize patients who can benefit from case management services.
- Evaluate a client for disability under the Medicaid program.

Please call Fran Smith at 522-4471 for more information.



Editorial

City Honors Our Editor

Carol Uyeda
Editorial Assistant

The following is an excerpt from a City Council Certificate "Honoring and Commending" HMJ Editor Norman Goldstein MD presented to him by Councilman John Henry Felix in a televised ceremony on July 17, 1998.

"The renowned name of Norman Goldstein has graced countless editions of Who's Who since 1972, including Finance & Industry 1979, Frontier Science & Technology 1982, Cancer Professionals & Facilities 1984, Science & Engineering 1991, Medicine & Health Care 1996, culminating in Who's Who in America and Who's Who in the World 1997.

Norman has dedicated his life to promoting sun-intensity awareness and skin cancer prevention through countless educational outreach programs. A Clinical Professor of Dermatology at the University of Hawaii School of Medicine, he has worked on more than 29 research projects and has written over 70 published articles and papers. He wrote the well-read medical educational book entitled The Skin You Live In and co-authored Micropigmentation - State of the Art. He has served on 6 editorial boards for magazines and journals, was twice past President and is a Board Member of the Hawaii Medical Library, Chairman of the Pacific Safe Sun Hawaii Program, and Editor of the Hawaii Medical Journal. He was chosen Hawaii Medical Association Physician of the Year in 1993, and is listed in Hawaii's Top Doctors and Best Doctors in America 1998. Most recently, he was appointed to the Medical Advisory Board and Board of Directors of Hemlock Society USA, and serves on the Governor's Blue-Ribbon Panel for Living and Dying with Dignity."

From the staff of the Hawaii Medical Journal, "Congratulations, Dr Goldstein!" As the City Council Certificate concludes, "Thank you for your display of dedication, commitment toward maintaining the pristine beauty of our *aina* and steadfast aloha for the people of Hawaii Nei. Best wishes for many more successful, rewarding and healthful years ahead."



Letters to the Editor

Timothy C. Jahraus MD and
Edwin M. Montell MD

We have read with interest your comments about Physician Assisted Suicide and your last editorial soliciting comments from the membership.

Physician assisted suicide, as we're sure you know, is nothing new to the 20th century. In ancient Greece and Rome, patients never knew if their physician would heal them or kill them, particularly the less productive members of society, the elderly, the disabled and the sickly infants. It is from this uncertainty that Hippocrates launched a reformation out of which came the oath many of us took on joining the profession. More contemporary thought in this area includes the German medical sentiment favoring euthanasia (c. 1930) and the Dutch experience. An official Dutch government survey revealed that in 8,100 cases in which doctors prescribed lethal overdoses of pain medication 61% of the patients had not consented to their death. Former surgeon general. Dr. C. Everett Koop, in a collaborative effort with Francis Schaeffer 20 years ago wrote about the "slippery slope" on which we are now traveling where abortion on demand leads to euthanasia which lead to infanticide and so on.

As members of the medical profession, we have a sacred duty to preserve life. Each patient we see had immeasurable value and God alone retains sovereignty over life and death. To betray this confidence placed in us by our patients undercuts the foundational trust patients have in us and moves us backwards not ahead. Those particularly at risk in efforts to legalize euthanasia will be the poor, the disabled and the elderly. Euthanasia proponents at present, of course, would not consider extending euthanasia to any but the terminally ill. History teaches us this narrow application of "mercy killing" will eventually be expanded. Recall that only a few short years ago Jack Kevorkian was considered a medical Pariah. Now we openly discuss legalizing euthanasia. Is this progress? We think not.

Our state is known by many as the health state. We would like to continue to engender that image, not to promote DADD or any other euthanasia acronym.

Editors Note:

The Journal welcomes all comments from our members pertaining to the most important medical, legal and moral issue of all time.

Beat Cancer with Common Sense.

- Cut down on fats • Eat more high-fiber foods
- Eat fruits and vegetables rich in vitamins A and C
- Eat less salt-cured and smoked foods. • Drink alcohol moderately



**THERE'S NOTHING
MIGHTIER THAN THE SWORD**

The Birth of a Health Plan

UH Med Schools's Plan

Reprinted from the Honolulu Advertiser, Island Voices, written by Max G. Botticelli

In today's world only those universities that have learned to function successfully as capitalistic enterprises are able to gain greatness.

The funds available from tuition and taxes are no longer able to support the research functions that are the essence of a great institution of higher learning. Those funds are obtained either as research grants or as a result of the successful marketing of a university's substantial intellectual assets.

In no other field has this been as obvious as in health care. From Harvard to Stanford, the provision of medical care by their faculties has been a major source of funding of the research missions of medical schools.

Until 1993, there were only three U.S. medical schools without a successful faculty practice plan. Such plans are the mechanism by which full and part-time faculty join together to provide medical care. The proceeds are used to supplement faculty salaries and support educational and research programs. The University of Hawaii John A. Burns School of Medicine was one of the three.

Recognizing that this was a serious impediment to the attainment of preeminence in the medical sciences, the faculty members of the medical school formed University of Hawaii Health Care Associates in 1993.

The medical school had been envisioned as a community-based school and therefore part-time or unpaid faculty had always provided much of the teaching. Clearly, these physicians were essential to the success of Hawaii Health Care Associates; 250 were recruited to participate as members.

Initially, its income was derived from the provision of medical care to Hawaii Quest patients. Rather than distribute all of this income to themselves, the physician members of Hawaii Health Care Associates, as a public service, agreed to divert a significant amount to fund their start-up and to invest in a unique new venture.

All successful medical school faculty practice plans have been organized around a university medical center. No such medical center existed in Hawaii so a different approach was needed.

An opportunity became available when Hawaii Dental Service decided to concentrate its efforts on providing dental insurance and give up its management contract with HDS Medical, a mutual benefit health insurance company. Hawaii Health Care Associates negotiated the transfer of this management agreement to U-Med, a wholly owned subsidiary. Subsequently, HDS Medical became University Health Alliance.

The vision was a health-care system, in which physicians are partners, that would allow coordination of all aspects of the care delivered to its members. This became complete when Hawaii Health Care Associates sold some of its interest in U-Med to Hawaii IPA, an independent physician association made up of the finest primary care and specialist physicians in the state.

With this transaction, the number of physicians participating in this exciting new health-care system was increased to 336. Eventually, this number will increase to approximately 800.

These organizations form a vertically integrated system that allows coordination of all aspects of health care while preserving the professional values that are so important to the practice of medicine:

- University Health Alliance administers health insurance plans.
- Hawaii IPA provides health-care services to members of University Health Alliance and other plans.
- Hawaii Health Care Associates provides the research required to assure that the care delivered is cost-effective and of the highest quality.
- U-Med manages these organizations.

All of these organizations have pledged to uphold the highest ethical and professional standards. All are dedicated to excellence in health-care delivery. All have pledged to support the educational and research goals of the UH medical school.

As the University of Hawaii seeks to chart a new course to excellence, enterprises such as described above should be encouraged. It represents a truly community-based effort to answer the health-care needs of the public and at the same time provide additional financial support for educational and scientific programs. It is a fine example of a merger of academia and capitalism.

Max G. Botticelli, MD, is emeritus professor of medicine at the John A. Burns School of Medicine, and chairman and CEO of U-Med.

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*The exact mechanism of action is unknown.

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[†]Double-blind, comparative clinical studies have not been conducted to evaluate comparative efficacy.

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Medical School Hotline

Commitment to "Diversity"

Nanette L.K. Judd, RN, MPH, PhD
Director, Imi Ho'ola Program and
Satoru Izutsu, PhD, Associate Dean
John A. Burns School of Medicine

For twenty-five years, the University of Hawaii John A. Burns School of Medicine (JABSOM) has successfully conducted an

affirmative-action program known as *Imi Ho'ola* (*Those Who Seek to Heal*). This Program's efforts have contributed to the promotion of diversity within JABSOM's student population by providing opportunities in medicine for Native Hawaiians, Filipinos, Samoans, residents of the US-Affiliated Pacific Islands (Marshallese, Pohnpeians, Kosraeans, Yapese, Chamorros, Palauans) and South-East Asian immigrants. In 25 years, 337 have been accepted into the Program. Seventy-four percent or 123 students have graduated from JABSOM. Others have become nurses, public health workers, medical technologists and other health specialties.

A primary feature of the Program is to train physicians who will serve the socially, economically, and educationally disadvantaged populations. There is a desperate need for physicians who identify themselves with these populations to deliver culturally competent

and effective health care. This is not only evident in the Pacific but in our entire nation. At the 1996 Annual Meeting of the Association of American Medical Colleges (AAMC), Dr Jordan J. Cohen, President of the AAMC, stated, "Learning how to deliver culturally competent care means learning medicine ... from faculty who are themselves emblematic of society's diversity. Textbooks alone just won't cut it" (1996, p 4). A sequel to this goal is the development of physician leaders who will not only contribute to the total welfare of the community in which they find themselves, but become teachers in medicine.

Graduates have also returned to serve as faculty at JABSOM. They teach in the classrooms as well as in the community hospitals and clinics. Imi Ho'ola graduates comprise 2 percent of the compensated faculty at JABSOM. Two graduates from *Imi Ho'ola* are Chairpersons for the Department of Psychiatry and the Department of Family Practice and Community Medicine. In addition, *Imi Ho'ola* alumni participate in recruitment activities at the high school and university levels for students who will augment their numbers as well as replace them in the vital role of serving those least represented ethnic groups in Hawaii. As physicians, these graduates serve as role models to those who have an exceptional desire and motivation toward a medical career. An example is Dr Phillip Reyes, the Co-Medical Director for the Molokai General Hospital. Born and raised on the island of Molokai, Dr Reyes provides needed primary care services to the people of Molokai. In addition, he works in partnership with the schools in promoting health careers among the youth.

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DESCRIPTION: AZELEX[®] (azelaic acid cream) 20% contains azelaic acid, a naturally occurring saturated dicarboxylic acid. Structural Formula $\text{HOOC}-(\text{CH}_2)_7-\text{COOH}$. Chemical Name: 1,7-heptanedicarboxylic acid. Empirical Formula $\text{C}_9\text{H}_{16}\text{O}_4$. Molecular Weight: 188.22. **Active Ingredient:** Each gram of AZELEX[®] contains azelaic acid 0.2 gm (20% w/w). **Inactive Ingredients:** cetearyl octanoate, glycerin, glyceryl stearate and cetearyl alcohol and cetyl palmitate and cocoglycerides, PEG-5 glyceryl stearate, propylene glycol and purified water. Benzoic acid is present as a preservative. **CLINICAL PHARMACOLOGY:** The exact mechanism of action of azelaic acid is not known. The following *in vitro* data are available, but their clinical significance is unknown. Azelaic acid has been shown to possess antimicrobial activity against *Propionibacterium acnes* and *Staphylococcus epidermidis*. The antimicrobial action may be attributable to inhibition of microbial cellular protein synthesis. A normalization of keratinization leading to an anticomedonal effect of azelaic acid may also contribute to its clinical activity. Electron microscopic and immunohistochemical evaluation of skin biopsies from human subjects treated with AZELEX[®] demonstrated a reduction in the thickness of the stratum corneum, a reduction in number and size of keratohyalin granules, and a reduction in the amount and distribution of filaggrin (a protein component of keratohyalin) in epidermal layers. This is suggestive of the ability to decrease microcomedo formation. **Pharmacokinetics:** Following a single application of AZELEX[®] to human skin *in vitro*, azelaic acid penetrates into the stratum corneum (approximately 3 to 5% of the applied dose) and other viable skin layers (up to 10% of the dose is found in the epidermis and dermis). Negligible cutaneous metabolism occurs after topical application. Approximately 4% of the topically applied azelaic acid is systemically absorbed. Azelaic acid is mainly excreted unchanged in the urine but undergoes some β -oxidation to shorter chain dicarboxylic acids. The observed half-lives in healthy subjects are approximately 45 minutes after oral dosing and 12 hours after topical dosing, indicating percutaneous absorption rate-limited kinetics. Azelaic acid is a dietary constituent (whole grain cereals and animal products), and can be formed endogenously from longer-chain dicarboxylic acids, metabolism of oleic acid, and ω -oxidation of monocarboxylic acids. Endogenous plasma concentration (20 to 80 ng/mL) and daily urinary excretion (4 to 28 mg) of azelaic acid are highly dependent on dietary intake. After topical treatment with AZELEX[®] in humans, plasma concentration and urinary excretion of azelaic acid are not significantly different from baseline levels. **INDICATIONS AND USAGE:** AZELEX[®] is indicated for the topical treatment of mild-to-moderate inflammatory acne vulgaris. **CONTRAINDICATIONS:** AZELEX[®] is contraindicated in individuals who have shown hypersensitivity to any of its components. **WARNINGS:** AZELEX[®] is for dermatologic use only and not for ophthalmic use. There have been isolated reports of hypopigmentation after use of azelaic acid. Since azelaic acid has not been well studied in patients with dark complexions, these patients should be monitored for early signs of hypopigmentation. **PRECAUTIONS: General:** If sensitivity or severe irritation develop with the use of AZELEX[®], treatment should be discontinued and appropriate therapy instituted. **Information for patients:** Patients should be told: 1. To use AZELEX[®] for the full prescribed treatment period. 2. To avoid the use of occlusive dressings or wrappings. 3. To keep AZELEX[®] away from the mouth, eyes and other mucous membranes. If it does come in contact with the eyes, they should wash their eyes with large amounts of water and consult a physician if eye irritation persists. 4. If they have dark complexions, to report abnormal changes in skin color to their physician. 5. Due in part to the low pH of azelaic acid, temporary skin irritation (pruritus, burning, or stinging) may occur when AZELEX[®] is applied to broken or inflamed skin, usually at the start of treatment. However, this irritation commonly subsides if treatment is continued. If it continues, AZELEX[®] should be applied only once-a-day, or the treatment should be stopped until these effects have subsided. If it troublesome irritation persists, use should be discontinued, and patients should consult their physician. (See ADVERSE REACTIONS.) **Carcinogenesis, mutagenesis, impairment of fertility:** Azelaic acid is a human dietary component of a simple molecular structure that does not suggest carcinogenic potential, and it does not belong to a class of drugs for which there is a concern about carcinogenicity. Therefore, animal studies to evaluate carcinogenic potential with AZELEX[®] Cream were not deemed necessary. In a battery of tests (Ames assay, HGPRT test in Chinese hamster ovary cells, human lymphocyte test, dominant lethal assay in mice), azelaic acid was found to be nonmutagenic. Animal studies have shown no adverse effects on fertility. **Pregnancy: Teratogenic Effects: Pregnancy Category B.** Embryotoxic effects were observed in Segment I and Segment II oral studies with rats receiving 2500 mg/kg/day of azelaic acid. Similar effects were observed in Segment II studies in rabbits given 150 to 500 mg/kg/day and in monkeys given 500 mg/kg/day. The doses at which these effects were noted were all within toxic dose ranges for the dams. No teratogenic effects were observed. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed. **Nursing Mothers:** Equilibrium dialysis was used to assess human milk partitioning *in vitro*. At an azelaic acid concentration of 25 $\mu\text{g/mL}$, the milk/plasma distribution coefficient was 0.7 and the milk/buffer distribution was 1.0, indicating that passage of drug into maternal milk may occur. Since less than 4% of a topically applied dose is systemically absorbed, the uptake of azelaic acid into maternal milk is not expected to cause a significant change from baseline azelaic acid levels in the milk. However, caution should be exercised when AZELEX[®] is administered to a nursing mother. **Pediatric Use:** Safety and effectiveness in pediatric patients under 12 years of age have not been established. **ADVERSE REACTIONS:** During U.S. clinical trials with AZELEX[®], adverse reactions were generally mild and transient in nature. The most common adverse reactions occurring in approximately 1-5% of patients were pruritus, burning, stinging and tingling. Other adverse reactions such as erythema, dryness, rash, peeling, irritation, dermatitis, and contact dermatitis were reported in less than 1% of subjects. There is the potential for experiencing allergic reactions with use of AZELEX[®]. In patients using azelaic acid formulations, the following additional adverse experiences have been reported rarely: worsening of asthma, vitiligo depigmentation, small pigmented spots, hypertrichosis, reddening (signs of keratosis pilaris), and exacerbation of recurrent herpes labialis. **DOSAGE AND ADMINISTRATION:** After the skin is thoroughly washed and patted dry, a thin film of AZELEX[®] should be gently but thoroughly massaged into the affected areas twice daily, in the morning and evening. The hands should be washed following application. The duration of use of AZELEX[®] can vary from person to person and depends on the severity of the acne. Improvement of the condition occurs in the majority of patients with inflammatory lesions within four weeks. **HOW SUPPLIED:** AZELEX[®] is supplied in collapsible tubes in a 30 gm size: 30 g - NDC 0023-8694-30. **Note:** Protect from freezing. Store between 15°-30°C (59°-86°F). **Caution:** Federal (U.S.A.) law prohibits dispensing without a prescription. Distributed under license, U.S. Patent No. 4,386,104.

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Finally, the Program is mindful that it must not lose sight of the need to recognize their most important resource and responsibility, the community which the graduates serve. Currently, sixty-two percent of the *Imi Ho'ola* graduates are practicing in rural areas of Oahu and the Neighbor Islands. To ensure the relationship with the community, a community advisory committee has functioned since the inception of the Program in 1973 to guide the Program. Committee members include lawyers, psychologists, bankers, teachers and graduates of the program.

Imi Ho'ola is fulfilling the mission of the John A. Burns School of Medicine by teaching and training high quality physicians for Hawaii and the Pacific, thereby promoting diversity in the medical profession.

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President's Message

Managed Care Concerns

Leonard Howard MD

President, Hawaii Medical Association

There are many advantages for the physician to participate in the various managed care entities in our state. However, there are also some problems at the root of all managed care participation. The problems present themselves in subtle ways, that are sometimes not recognized as problems by physicians. These problems are the result of various Sections and Provisions of the Participating Provider Agreement that is signed in order to participate in a managed care organization (MCO).

Time and time again in reviewing MCO contracts the same land mines are found present in the contracts. It is necessary that all physicians carefully read the contracts received from an MCO, and understand what commitment is being made by your signature on the contract. There are several common clauses that might be found in a proposed agreement which are likely to cause trouble in various ways. When these clauses are identified in managed care agreements, consider asking whether the subject matter contained in these clauses is really necessary to address in the managed care relationship. If not, they need not be in the agreement and should be removed before the agreement is signed. Seven areas of concern that are often found in many contracts which can be problematic include:

1. **General Offsets and Adjustments.** Provider agrees to authorize Company to deduct moneys that may otherwise be due and payable to Provider from any outstanding moneys that Provider may, for any reason, owe to Company. Provider agrees that Company may make retroactive adjustments to the payment schedule outlined in the agreement. *This provision gives the MCO a free hand to do whatever accounting it desires and deduct moneys from a physician or physician group in its sole discretion without a requirement to account to the physician or physician group and explain such deductions.*
2. **Litigation.** In the event of any litigation between the parties arising out of or related to this Agreement, the prevailing party shall be entitled to recover from the other party its reasonable attorney's fees and cost of litigation, including, without limitation, any expert witness fees. *This clause seems designed to appeal to the unsophisticated physician who abhors litigation and has not stopped to consider that he or she is already greatly disadvantaged in any potential controversy with the company, since the MCO has far more to spend in legal fees. This clause would simply up the ante by potentially doubling (at least) a physician's cost and further chill any prospect for the physician to obtain relief in a court of law.*
3. **Noninterference with Members.** During the term of this Agreement, Provider and its Qualified Physician shall not advise or counsel an Enrollee to dis-enroll from Company's Plan and will not directly or indirectly solicit any Enrollee to enroll in any other MCO or similar Health care service plan or insurance program. *No matter how it is dressed up, provisions*

Public Service Announcements

American Cancer Society Seeking Volunteers.—Volunteers with medical knowledge needed to staff and man the library and a call-in telephone information line. These people will be trained by the American Cancer Society, and will be responsible for giving out cancer information to walk-ins and callers. For further information call Susan Jacobs at the American Cancer Society, 595-7500 ext. 202.

Volunteers needed for Angels on Wheels, drivers to take cancer patients to and from their doctor/cancer therapy appointments. To volunteer, contact the American Cancer Society office in your area.

Volunteers needed at all American Cancer Society offices to assist in clerical duties. Call to volunteer: Windward 262-5124, Leeward 486-8404, and Honolulu 595-7544.

Seeking Helpline Volunteers.—The Honolulu Chapter of the Alzheimer's Assn. is seeking caring individuals to provide information and referrals and emotional support to callers needing assistance in coping with Alzheimer's disease. Volunteers will answer the telephone Helpline a minimum of 3-4 hours a week at our friendly Honolulu chapter office, Monday-Friday, between the hours of 9 and 4 p.m. Orientation and training will be provided. For further information or to receive a volunteer application, please contact the Honolulu Chapter at 591-2771.

Hospice Hawaii Volunteer Training.—20-hr course at Hospice Hawaii office. Wednesday, Sept. 9, 6-9 p.m.; Saturday, Sept. 12, 8-5 p.m.; Saturday, Sept. 19, 8-5 pm. Call 924-9255, ext. 219 for more information.

Music Therapy Lectures Aug. 22.—Open to the public, held at Hospice Hawaii office, call Barb Shirland, 924-9255 ext. 209. Featuring: Dr. Deforia Lane and Daniel Kobiak. The Music Therapy Program involves both listening and participation and provides benefits in many areas including: physical, psychological, social and spiritual. Founded in 1979, Hospice Hawaii is a non-profit organization that offers medical, social, emotional, and spiritual support for patients and families facing a terminal illness.

that prohibit physicians from speaking freely with their patients chill the physician-patient relationship and are considered by many reasonable physicians to be a form of "gag clause". While a managed care company may believe that such terms are commercially reasonable because they have spent time and money marketing to obtain the business of the employer who is covering health care costs for the patient, they fail to realize that because of the increasingly complex medical delivery system created by managed care, the physician is often the first and most valued person a patient turns to for discussion of health care coverage options. This communication is becoming one of the most common in the physician-patient relationship, given today's evolving health care climate. Any such discussion could be deemed as advice or counseling that could cause the patient to dis-enroll from the plan or prompt the patient to enroll in any other plan.

4. Indemnification and Hold Harmless. Provider and MCO shall indemnify the other and hold the other harmless against any and all loss, damage, liability and expense, including court cost, with respect to this agreement directly resulting from or arising out of the dishonest fraudulent, negligent, or criminal acts or omission of the respective party's employee, or contractors excluding each other, agents, shareholders, officers, and directors acting alone or in inclusion with others. *Most physicians do not realize that when they agree to this provision they are agreeing to pay for any such lawsuits, including both the lawyer's fees and any settlements or judgments, out of their own personal pocket, since liability insurance policies virtually never cover this type of voluntary obligation. MIEC and HAPI have both made this clear in Hawaii. Further, the likelihood that managed care companies will, in fact, be named in such suits is increasingly common. With this agreement, the managed care company has the leverage to force a physician into settling a case that many be frivolous, and suffer the associated report to the National Practitioners Data Bank, because of the potentially bankrupting implications of the indemnity clause.*

5. Termination Without Cause. This agreement may be terminated without cause by either party by written notice given to the other party at least one hundred twenty (120) days in advance of such termination. In such cases termination will occur on the last day of the month in which the one hundred and twentieth day following such notice occurs. Upon said termination by Provider, the rights of each party hereunder will terminate with respect to subscriber groups enrolled by the Company after the Company receives Provider's notice of termination. However, this Agreement will continue in effect with respect to Enrollees existing prior to the Company's receipt of such notice until the anniversary date of the Company's contract with the subscriber group or for one (1) year, whichever is earlier, unless

otherwise agreed to by the Company. If termination is by the Company, the rights of each party will terminate on the effective date of termination. *Although virtually every managed care agreement contains a termination without clause provision, many, such as this one, effectively allow the MCO to terminate on 120 days notice but, on close inspection, requires the physician group to continue providing services for one year or more after the group has given its notice. Businesslike physicians and physician groups generally insist that any termination without cause provision be mutual.*

6. Liability. Notwithstanding anything herein to the contrary, Company's liability, if any, for damages to Provider for any cause whatsoever arising out of or related to this Agreement, regardless of the form of the action, shall be limited to Provider's actual damages, which shall not exceed the amount actually paid to Provider by Company under this Agreement during the twelve (12) months immediately prior to the date the cause of action arose. The Company shall not be liable for any indirect, incidental, punitive, exemplary, special or consequential damages of any kind whatsoever sustained as a result of a breach of agreement or any action, inaction, alleged tortious conduct, or delay by Company. *This provision simply strips the physician or physician group of any legitimate legal rights it may have in a litigation with the MCO by taking away all remedies that may be available except actual damages that are equal to or less than the total amount of compensation a physician or physician group has received from the company in the previous year. There can be no rational basis in the managed care relationship for a provision such as this. No attempt is made to make such limitation on remedies mutual, and, therefore, many reasonably prudent and businesslike physicians would conclude that it should have no place in the managed care agreement.*

7. Limitation on Action. Notwithstanding anything herein to the contrary, no action, regardless of form, arising out of or relating to this agreement may be brought by Provider more than twelve (12) months after such cause of action has arisen. *The statute of limitations for actions on contracts such as this vary from state to state but generally extend for five (5) years. There is no rational reason why a MCO should seek special treatment not available to others by limiting such actions to a twelve (12) month period.*

Keep your eyes open when reading contracts in the future. If you have questions about an agreement, call the HMA and ask about it. We have a committee specifically set up to deal with questions about Managed Care Organizations. We are also able to get information and opinions from the Division of Representation of the AMA. Just another reason for supporting organized medicine with your membership dues.



Harry L. Arnold Jr. MD Case of the Month

Chronic Meningococcemia Mimicking Acute Rheumatic Fever

Donald A. Person, MD, Colonel, MC, USA*
and Mary D. Moore, MD **

Chronic meningococcemia is an uncommon feature of meningococcal disease, particularly in childhood. In fact, less than two dozen cases have been previously reported in the English literature. The presentation of chronic meningococcemia is common to a number of infectious and rheumatic diseases. In Benoit's review of 148 cases: all had fever and chills, 138 (93%) had rash, and 104 (70%) had arthritis/arthritis.¹ A positive blood culture for *Neisseria meningitidis* establishes the diagnosis. The differential diagnosis is considerable and notably includes: Henoch - Schölein purpura (HSP), acute rheumatic fever (ARF), subacute bacterial endocarditis (SBE), Lyme disease, systemic lupus erythematosus (SLE), and systemic juvenile rheumatoid arthritis (JRA). The case of a seven-year-old boy with chronic meningococcemia whose condition completely fulfilled the updated Jones Criteria² for the diagnosis of ARF (to include the isolation of a β -hemolytic streptococcus from his throat), is here reported.

Case Report

A previously healthy seven-year-old white boy presented with pain in his right ankle and a limp. His arthritis subsided over two days only to recur along with fever to 102.5°F. He was hospitalized

in a community hospital for eight days during which time he developed evanescent pink, subcutaneous nodules on his extremities. His fever would resolve then recur every two to three days. Six blood cultures were negative. A transient left knee effusion was noted on the seventh hospital day. A radionuclide bone scan was normal. He received no medication other than acetaminophen for fever and was referred on the eighth day of his illness. On admission to the Texas Children's Hospital (Houston, TX), he had a temperature of 102° F and appeared moderately ill. Examination of the skin revealed ten round, tender, red nodules on his right leg, buttock, back, occiput, and neck. The nodules varied in size from 5-10 mm. in diameter and were exquisitely tender to touch. He did not have petechiae or purpura. A pericardial friction rub was heard on the first day and resolved spontaneously. He had arthritis with a small effusion of his right ankle. Complete blood count and urinalysis were normal with the exception of a mild thrombocytosis (platelet count was 569,000). His erythrocyte sedimentation rate (ESR) was 50 mm/hour. Rheumatoid factor (RF) was negative as was the antinuclear antibody (ANA, negative <1:10). His C3 (third component of complement) was 150 mg/dl (normal 95-195) and the C4 (fourth component of complement) was 23 mg/dl (normal 15-150). Total hemolytic complement activity (CH₅₀) was 495 u/ml (normal 304-480). His Immunoglobulin G (IgG) was 1100 mg/dl (normal 631-1298), Immunoglobulin A (IgA) 160 mg/dl (normal 70-312), Immunoglobulin M (IgM) 123 mg/dl (normal 56-258). Streptozyme was 400 STZ units, the antistreptolysin O (ASO) was 1:333 and antihyaluronidase was 1:512. Serologies for hepatitis A and B viruses (HB_s antigen, HB_e antigen, HB_c antigen, anti-HB_s, anti-HB_e, anti-HB_c, and anti-HA antibody) were negative. A test for circulating immune complexes was normal (C1q binding 9%, normal <13 %). The PPD skin test was negative with a positive tetanus toxoid control. His throat culture yielded a β -hemolytic streptococcus, later identified as group F. The joint-bone scan, chest radiograph, electrocardiogram, and echocardiogram were all normal. He was afebrile until the third hospital day when he developed a temperature of 100°F, at which time two separate blood cultures were obtained. Penicillin VK (250 mg p.o. qid) and aspirin (80 mg/kg/d in four divided doses) were started on the fourth day when the throat culture was reported positive for a β hemolytic streptococcus and the diagnosis of ARF appeared to be established. On hospital day six the blood cultures obtained on day three were reported as positive for *N. meningitidis*, type A, establishing the diagnosis of chronic meningococcemia, a full two weeks after the onset of his symptoms. His fever and nodules completely resolved within 24 hours of starting therapy. His right ankle effusion resolved within 72 hours and he had no further joint complaints. Aspirin was discontinued. His family received rifampin prophylaxis, and the patient was treated with a ten day course of oral penicillin. At follow-up, two months after discharge, the child was found to be free of all symptoms.

Discussion

Acute rheumatic fever was the main diagnostic consideration in this child. The presence of migratory polyarthritis, a pericardial friction rub, subcutaneous nodules (including occipital nodules), fever, and an elevated ESR all strongly supported a diagnosis of ARF.² The isolation of a β -hemolytic streptococcus (later shown to be group F) from the patient's throat and positive serologic tests for

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The opinions expressed are those of the author and should not be construed as official policy of the Department of the Army or the Department of Defense.

antistreptococcal antibodies confirmed the probable diagnosis of ARF and prompted the institution of penicillin and aspirin therapy. The patient was asymptomatic and had already received 48 hours of oral penicillin when the blood culture results became available. Thus, the decision for continued oral antibiotic therapy was made. Remarkably, T. Duckett Jones, in his classic paper on the diagnosis of rheumatic fever mentions "meningococcal septicemia" as well as "gonococcal arthritis" in the differential diagnosis of ARF.³

Chronic meningococcemia is uncommon in children as compared to adults. Conversely, meningococcal disease, overall, is much more common in children and the incidence is the highest in infants less than one year of age. Since 1902, only 20 patients less than 18 years of age with chronic meningococcemia have been described in the English speaking literature.^{4,5} Leibel *et al* reviewed 13 of these cases in 1974.⁴ The symptoms in children were similar to those in adults, but less severe. However, the duration of illness, prior to diagnosis was shorter in children, and the first positive blood culture occurred earlier in the course of the illness than in adults. Ploysangam and Sheth reviewed the literature and added the twentieth case of chronic childhood meningococcemia in 1996.⁵

Diagnosis is based on the finding of a positive blood culture for *N. meningitidis*. Treatment with penicillin for a 10-14 day course is recommended by most authors. The parenteral route is preferred. Since 1970, there have been several reports of individuals with chronic meningococcemia who were found to have deficiencies of various complement components, including C6, C7, and C8.⁶⁻⁹ One case of chronic meningococcemia and mild IgM deficiency has been

reported.¹⁰ Deficiencies of C3, C5, C6, C7, and C8 have been associated with recurrent episodes of disseminated gonococcal infection and acute meningococcal meningitis.^{7,8} A 14 month old boy with IgG₂ subclass deficiency and recurrent acute meningococcemia has been described,¹¹ as has a 15-year-old French boy with IgA deficiency.¹²

The overall incidence of complement deficiencies in the general population is low with C2 deficiency being the most common, the frequency of C2Q0 being less than 1%. Complete deficiencies of the early classic C components are associated with rheumatic diseases which resemble SLE, vasculitis, and JRA.

Homozygous deficiencies of the Membrane Attack Complex (MAC) (i.e. C5b-C9) predispose to recurrent neisserial sepsis. Ellison *et al* identified six patients with complement component deficiencies when they sequentially screened 20 patients presenting with a first episode of meningococcal disease. Thus, 30% of their patients with acute meningococcal disease had an underlying deficiency of a complement component.⁸

The pathogenesis of chronic meningococcemia is not well understood. No predominant strain of meningococcus has been associated with this entity. Chronic meningococcemia appears to be a problem of host defense. One current view is that the disorder represents a serum sickness-like illness with the symptoms occurring secondary to the circulation and deposition of antigen-antibody complexes. Certainly the recent histopathologic demonstration of leukocytoclastic vasculitis in the skin lesions of a 17-month-old boy with chronic meningococcemia lend credence to support that view.⁵

It is not clear why our patient contracted a relatively benign form of meningococcemia. His normal immunoglobulin and complement levels rule out an obvious deficiency of immunoglobulin or complement. This child was clinically and by all laboratory parameters, immunocompetent. There is no known association of chronic meningococcemia and an antecedent streptococcal infection. However, anecdotally, one of us (DAP) has observed recurrences, recrudescences, and/or exacerbations of HSP, JRA, and Kawasaki disease with concomitant group A, β -hemolytic streptococcal pharyngitis. This child's streptococcal infection certainly compounded the interpretation of his illness and was presumably responsible for the induction of the anti-streptococcal antibodies. The classic syndrome associated with ARF and that seen in our patient with chronic meningococcemia may very well represent the final common pathway of the host-parasite relationship. Immunological reactions are very likely operative and antigen-antibody complexes no doubt play a pivotal role. Only the antigens are different - streptococcal in ARF and meningococcal in chronic meningococcemia. This case, at the very least, illustrates the importance of obtaining several blood cultures in a child with fever, rash, and polyarthritis in order to establish the correct diagnosis.

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Epidemiology of Congenital Diaphragmatic Hernia, Hawaii, 1987-1996

Mathias B. Forrester BS* and Ruth D. Merz MS**

Congenital diaphragmatic hernias (CDHs) in Hawaii between 1987 and 1996 were examined with data from a birth defects surveillance system. There were 51 cases of CDH (prevalence 2.45 per 10,000 births). Forty-nine percent of livebirths survived, an increase over the rate reported in Hawaii in 1975-1982. These results are similar to those reported by other population-based studies.

Introduction

Congenital diaphragmatic hernia (CDH), a birth defect in which an incompletely developed diaphragm allows the abdominal organs to herniate into the chest, occurs in approximately 3-4 per 10,000 births.¹⁻³ Although the defect can be repaired surgically, the mortality rate from CDH is still high.¹⁻⁵ One study has estimated that the treatment and care of each individual with CDH would cost approximately \$250,000 in direct and indirect costs over his or her lifetime.⁶

Little is known about the etiology of CDH. Epidemiologic studies have noted an association between CDH and chromosomal abnormalities, and that a high proportion of CDH cases also have other structural defects.^{1-3,5,7} One study reported a non-significant increase in CDH prevalence over time, and greater prevalence of the defect among males, but no differences by ethnic group, maternal age, or parity.²

CDH can be detected in-utero by ultrasonography,⁸ and the detection of serious birth defects in pregnancy has led to the elective termination of affected pregnancies.^{2,3,5,7} A number of the birth defect surveillance systems currently in operation were created prior to the common use of prenatal screens and diagnostic tests. Many of these systems do not include in their ascertainment elective pregnancy terminations following the prenatal diagnosis of birth defects. As a consequence, most of these systems cannot evaluate the impact of prenatal diagnosis and elective termination on CDH rates. Several studies have reported from 1 to 21 percent of prenatally diagnosed and 1 to 5 percent of all CDH pregnancies are electively terminated.^{2,3,5,7}

In this study, data collected by the Hawaii Birth Defects Program (HBDP) was used to examine the CDH mortality rate over a 10-year period (1987-1996) in Hawaii. It investigates the effect of demographic factors such as maternal ethnicity and age on the prevalence of the defect and the proportion of cases with chromosomal and other structural defects. The study also evaluates the impact of prenatal diagnosis and elective termination on the prevalence of CDH. Because the HBDP has nearly universal access to prenatal diagnostic information and follow-up data on elective terminations, Hawaii is an ideal setting in which to study their effects on the prevalence rates of birth defects.

Methods

Data were from the Hawaii Birth Defects Program (HBDP), a population-based, active surveillance system for birth defects and other adverse reproductive/pregnancy outcomes for the entire state of Hawaii. All pregnancies are included in the HBDP regardless of outcome (livebirth, fetal demise, or elective termination) or the gestational age of the fetus at the end of the pregnancy. In order to be included in the registry: 1) the pregnancy must be affected by one or more moderate to severe birth defects or other adverse conditions such as antenatal maternal substance abuse, neoplasms, and congenital infections; 2) the end of the pregnancy must occur in Hawaii; and 3) the diagnosis must be made prenatally or within one year after delivery.

Affected pregnancies were identified by examining lists of medical record diagnostic codes and other reports provided by hospitals where births and terminations due to fetal anomalies occur, tertiary care facilities, and clinics and laboratories that perform prenatal diagnostic screening, testing, or follow-up counseling. In addition to clinical information about each reported infant or fetus, the HBDP collected data on demographic characteristics, health behaviors, and

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other medical information regarding the biological parents.

The analysis included ten years of data collected from 1987 through 1996 on all reported cases with congenital absence or hernia of the diaphragm. Cases with a probable or possible diagnosis which could not be confirmed were excluded from the analysis, as were cases of eventration of the diaphragm. The pregnancy outcome, year of birth, place of residence, sex, plurality, side of defect, and maternal age and race/ethnicity for each case were determined. Ethnicity was grouped as white, Far East Asian (Japanese, Chinese, and Korean), Pacific Islander, and Filipino. Cases belonging to other races/ethnicities (black, Hispanic, etc.) were excluded from the race/ethnicity analysis because of their relatively small numbers in Hawaii's birth population. The presence of chromosomal and/or other major structural anomalies were identified. Diagnoses of hypoplastic lung, malrotation, and defects associated with prematurity (patent ductus arteriosus, patent foramen ovale) were excluded in the analysis of additional anomalies.

The various demographic factors were examined and compared with livebirth and stillbirth data provided by the Hawaii State Department of Health/Office of Health Status Monitoring, as derived from birth and fetal death certificates. Prenatal diagnosis, elective termination, and survival rates were calculated. Ninety-five percent confidence intervals were calculated by Poisson probability. Secular trends were analyzed by the Chi-square tests for trend.

Results

The study identified 51 confirmed cases of congenital diaphragmatic hernia (CDH) in Hawaii between 1987 and 1996 for a prevalence of 2.45 per 10,000 births (95 percent confidence interval (CI) 1.82-3.22). All were the posterolateral type of diaphragmatic hernia except for one case of Morgagni diaphragmatic hernia. Of the 31 cases where the side of the defect was known, 26 (83.9 percent) were on the left and 5 (16.1 percent) on the right. Thirty (58.8 percent) of the cases were isolated while 21 (41.2 percent) had one or more other congenital anomalies not typically associated with CDH. Five of the cases, all of which had other congenital anomalies, were found to have chromosomal abnormalities (3 trisomy 18, 1 trisomy 16, 1 4p-). This represents 9.8 percent of all CDH cases or 22.7 percent of those cases which were known to have had cytogenetic tests performed. Three (5.9 percent) of the CDH cases occurred among multiple births (2 sets of discordant twins and 1 set of discordant triplets).

The prevalence of CDH for each year is presented in table 1. There was a slight decline in the CDH prevalence over the ten-year period of study but this trend was not statistically significant ($P=0.173$).

Twelve (23.5 percent) of the cases were prenatally diagnosed. When the proportional prenatally diagnosed were examined for secular trends (table 1), a general increase over time was observed but not statistically significant ($P=0.268$).

Forty-five (88.2) of the CDH cases were liveborn while 1 (2.0 percent) was a fetal demise and 5 (9.8 percent of total or 41.7 percent of prenatally diagnosed cases) were electively terminated. Of the electively terminated cases, 2 were isolated cases of CDH while 3 had other congenital anomalies of which 2 included chromosomal abnormalities. There was never more than one electively terminated case in any given year and these cases were evenly distributed throughout the ten-year period of study.

Table 1.—Prenatal diagnosis, pregnancy outcome, and survival rate (for at least one year) of congenital diaphragmatic hernia by year, Hawaii, 1987-1996.

Year	Total rate*	Prenatally diagnosed No.	Elective terminations No.	Survival rate %
1987	1.99	1	0	25
1988	2.92	0	0	67
1989	4.77	2	1	44
1990	2.69	1	1	80
1991	2.30	1	0	60
1992	2.33	2	1	25
1993	2.37	2	0	25
1994	0.96	1	1	100
1995	2.53	2	1	25
1996	1.55	0	0	67
Total	2.45	12	5	49

*per 10,000 births

Of the 45 liveborn CDH cases, 22 were known to be alive at one year of age, giving a survival rate of 48.9 percent. None of the 7 cases which had been prenatally diagnosed and not electively terminated survived to one year, while 57.9 percent of the cases not prenatally diagnosed survived. Fifteen (53.6 percent) of the liveborn cases with isolated CDH survived, while only 7 (41.2 percent) of those with other congenital abnormalities survived. Table 1 presents the total one-year survival rate for liveborns with CDH by year of diagnosis. The survival rate varied between 25.0 and 100.0 percent during the ten-year period of study. A slight decrease in survival rate was detected; however, this decline was not statistically significant ($P=0.771$).

The prevalence of CDH by various demographic factors is exhibited in table 2. Whites had the highest prevalence among racial/ethnic groups, followed by Filipinos, Far East Asians, and Pacific islanders. Maui and Kauai Counties were found to have similar prevalence of CDH while the prevalence in the City and County of Honolulu was somewhat lower. The prevalence in Hawaii County was less than one-fifth that of the other counties. The prevalence was similar between metropolitan Honolulu and the rest of the state. The prevalence among mothers less than age twenty years was highest, almost double the next highest prevalence (35-39 years age group). None of the differences observed for any of the demographic factors was statistically significant.

Discussion

The prevalence of CDH in Hawaii between 1987 and 1996 was calculated to be 2.45 per 10,000 births. This is lower than the prevalence reported in other states: Iowa (2.7), California (3.3), and Utah (3.9).¹⁻³ Only the Iowa study¹ did not include elective terminations in its analysis, so differences in pregnancy outcomes cannot account for the prevalence differences between the studies.

Since this study identified a slight decline, albeit not statistically significant, in the prevalence over the ten-year period of study, and several of the other studies covered time periods preceding that of the current study,^{1,2} it could be suggested that the CDH prevalence in Hawaii was higher in the past and thus similar to that observed in

Table 2.—Prevalence of congenital diaphragmatic hernia for various demographic factors, Hawaii, 1987-1996.

Demographic factor	No.	Rate*	95% CI†
Maternal race/ethnicity			
White	18	3.34	1.98-5.27
Far East Asian	9	2.53	1.16-4.81
Pacific islander	12	2.31	1.19-4.04
Filipino	9	2.54	1.16-4.82
County of residence			
Honolulu	39	2.52	1.80-3.45
Hawaii	1	0.46	0.01-2.55
Maui	6	3.19	1.17-6.95
Kauai	3	3.15	0.65-9.19
Urbanity			
Metro. Honolulu	14	2.49	1.36-4.17
Rest of Hawaii	35	2.56	1.78-3.56
Maternal age (years)			
<19	5	6.38	2.07-14.88
20-24	12	2.35	1.22-4.11
25-29	18	3.25	1.93-5.14
30-34	8	1.82	0.79-3.59
35-39	7	3.50	1.41-7.22
>40	1	2.69	0.07-14.98
*per 10,000 births			
†confidence interval			

the other studies. However, if the current analysis is restricted to livebirths, the prevalence of 2.32 per 10,000 births is greater than that of 1.9 per 10,000 livebirths reported in Hawaii in 1975-1982,⁴ a time prior to the creation of the HBDP. Moreover, the Utah study³ covered a time period similar to the present one. So secular trends cannot explain the prevalence differences.

For those cases where the side of the defect was known, the vast majority (84 percent) were on the left side, a finding consistent with that of other studies,^{1,2,5,7} where the proportion of CDH which were on the left ranged from 78 percent to 92 percent. Approximately ten percent of all CDH cases (23 percent of those undergoing cytogenetic analysis) were found to have a chromosomal abnormality. This proportion is slightly higher than that seen in other studies,¹⁻³ but only one-third that found in another study.⁵ This latter study was restricted to prenatally diagnosed cases, though. Prenatally diagnosed CDHs may be more likely to undergo cytogenetic analysis in an effort to determine the prognosis for the fetus than would CDH cases which were diagnosed after birth and expired shortly thereafter. Forty-one percent of CDH cases not known to have a chromosomal abnormality were found to have other congenital anomalies not typically associated with the diaphragm defect. The proportion of CDHs with other anomalies ranged from 28 to 49 percent in similar studies.¹⁻³

Roughly 24 percent of the CDHs in Hawaii were prenatally diagnosed, less than half of the proportion observed in Utah.³ Since residents of Hawaii have near universal access to health care, a lower level of use of prenatal ultrasound in Hawaii is not likely to account for the discrepancy. CDH is not easily identified on prenatal ultrasound.⁹ Perhaps those facilities performing prenatal ultrasounds in Hawaii did not routinely search for the signs of CDH when performing their examinations, or the test may have been performed early in

the gestation when identifying the defect would have been even more difficult. The prenatal diagnosis of CDHs demonstrated a slight increase during the ten-year period of study, so the relatively poor record of prenatal diagnosis of CDH in Hawaii may be improving.

Ten percent of all CDH cases in Hawaii (42 percent of prenatally diagnosed cases) were electively terminated, a much higher proportion than that reported by California (0.8 percent) and Utah (5 percent).^{2,3} Access to prenatal screens and tests has been found to vary by geographical area.¹⁰⁻¹² However, this could only serve as an explanation for the difference in termination proportions between Hawaii and California. As noted previously, a greater proportion of CDHs were prenatally diagnosed in Utah than in Hawaii. More likely the differences represent variations in attitudes towards and access to elective terminations between the states. This hypothesis is possibly supported by the observation that the percentages of prenatally-diagnosed CDHs which were electively terminated varied widely in North America: Utah (10 percent),³ Alabama (21 percent),⁵ United States and Canada (1 percent).⁷

Maternal race was not found to impact a woman's risk for having a pregnancy affected by CDH, a finding which supports that observed in California.² The prevalence of CDH in Metropolitan Honolulu was similar to that for the rest of the state. While the CDH rate was roughly the same in three of the four counties in the state (City and County of Honolulu, Maui County, Kauai County), the rate in Hawaii County was less than one-fifth that of the others. Also, women less than age 20 were approximately twice as likely to have a pregnancy affected by CDH than any other age group. The lack of statistical significance for this observation precludes offering any potential explanation for these differences.

Forty-nine percent of the livebirths with CDH in Hawaii between 1987 and 1996 survived to age one year, a rate compatible with that observed in other states: California (44 percent)² and Utah (60 percent).³ This is also greater than the 33 percent survival rate observed in Hawaii during 1975-1982, suggesting that either the treatment and care of neonates with CDH has improved between the two time periods or cases less likely to survive are now being prenatally diagnosed and electively terminated. A slight decline in survival rate was identified over the ten-year period studied. This would appear to contradict the first hypothesis except that this trend was not statistically significant.

The survival rate has been reported to be lower for CDHs prenatally diagnosed than those detected after delivery,³ something observed in the current study where none of the livebirths prenatally diagnosed with CDH survived, while 58 percent of those detected after birth survived. Those cases which were prenatally diagnosed and electively terminated would likely suffer a similar higher risk for mortality if they had been allowed to continue. This would tend to support the second hypothesis.

Other studies had found that the survival rate for cases of CDH with other congenital defects was lower than that for isolated defects.¹⁻³ In the current study, 54 percent of isolated CDHs survived while 41 percent of those with other defects survived. Thus, if CDHs with additional congenital defects were more likely to be electively terminated, then the second hypothesis would be supported. However, the proportions of electively terminated CDHs and total CDHs with other defects were similar.

Most likely both hypotheses contribute to some extent to the improvement in survival of livebirths with CDH in Hawaii between 1975-1982 and 1987-1996.

The primary limitation with the current study was the small number of CDH cases included. This limited the statistical power of the analyses performed and left any differences and trends observed to be merely suggestive. One way to increase the number of cases, and thus the statistical power of the analyses, would be to extend the time period covered. For logistic reasons, the HBDP cannot consistently collect data prior to 1986, so future years would be needed for additional data. Due to the low prevalence of CDH, another analysis would have to wait for a number of years.

Also, the survival rate for CDH may be overestimated. The HBDP receives information on all deaths of infants less than age one year which occur in the state from the DOH. The DOH also receives information on deaths to state residents which occur in other states, but it is not known if all out-of-state deaths, particularly among infants, are reported to the DOH. Thus if an infant with CDH is transferred to another state for treatment and dies in the other state, this information may not reach the DOH, and through them the HBDP. However, this underestimation is believed to be low. Due to the serious nature of the defect, many infants with the defect expire shortly after delivery. And the critical nature of the condition may make the time necessary to transport the infant across the Pacific Ocean unrealistic and treatment of the CDH in Hawaii a preferable option.

In conclusion, the prevalence of CDH in Hawaii between 1987 and 1996 was found to be slightly lower than that of other population-based studies performed in other states. With the possible exception of county of residence and maternal age, demographic

factors did not appear to affect the risk for CDH in the state. A higher proportion of cases were electively terminated than that observed by other studies. Prenatal diagnosis of CDH and the presence of additional congenital defects reduced the chances of survival for an infant with CDH. For several possible reasons, the survival rate for CDH has improved over the last two decades.

Acknowledgments

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Noncontraceptive Health Benefits of the Oral Contraceptive Pill

Thomas S. Kosasa MD and Roy T. Nakayama MD

With over 17,000 articles published since 1966, the oral contraceptive pill is one of the most studied preventive health drugs. Recent studies have shown many important findings related to the noncontraceptive health benefits of the oral contraceptive pill including a reduction in ovarian cancer, endometrial cancer, pelvic inflammatory disease, breast disease, and acne.

Ovarian Cancer

Ovarian cancer is the most common cancer of the reproductive organs and is the fourth leading cause of death in women after cancer of the lung, breast, colon, and rectum. An estimated 27,000 cases of ovarian cancer are diagnosed each year, and 15,000 deaths occur yearly. Since ovarian cancer is difficult to detect and is generally advanced at the time of diagnosis, the 5-year survival rate is less than 45%.¹

Recent studies have shown that the risk of ovarian cancer decreases significantly with use of the oral contraceptive pill. Risk reduction has been shown to be 40% after 4 years, 53% after 8 years, and 60% after 12 years of oral contraceptive use.² Protection has been shown to begin with 1 year of use and persists from 10 to 19 years after the pill is stopped.³

Endometrial Cancer

Although endometrial cancer is the lowest cause of death from pelvic cancer, it is the most commonly diagnosed. Among U.S. women, 34,000 cases are diagnosed each year and 6,000 deaths occur yearly. A recent analysis of 10 epidemiologic studies published between 1980 and 1994 found a significant decrease in

endometrial cancer risk of 54% after 4 years, 66% after 8 years, and 72% after 12 years of oral contraceptive use.³ Protection against endometrial cancer has been shown to begin with 1 year of use and persists for at least 20 years after stopping the oral contraceptive pill.⁴

Pelvic Inflammatory Disease

Pelvic inflammatory disease affects more than 1 million women annually in the United States.⁵ Approximately 250,000 women develop more serious sequelae each year including tubal damage, chronic pelvic pain, ectopic pregnancy, and infertility.⁶ In a hospital-based-controlled study, a lower risk of pelvic inflammatory disease was observed among women taking the oral contraceptive pill continuously for at least 12 months compared to nonusers. In this study a reduction of 60% in the rate of hospitalization for pelvic inflammatory disease was observed.⁷

Bone Mineral Density

Women taking oral contraceptive pills may derive protection against osteoporosis. Cross-sectional studies of postmenopausal women have documented that prior users of the oral contraceptive pill have greater bone density and that this protection increases with longer duration of use.⁸ A 12% increase in bone mineral density was found in premenopausal women on the oral contraceptive pill compared with nonusers, with the greatest increase occurring in women who had used the pill for at least 10 years.⁹ Osteoporosis has also shown to be less common and to occur later in women who have been on the oral contraceptive pill.¹⁰

Benign Breast Disease

Studies have shown that after 2 years of oral contraceptive use there was a reduction of 83% in the incidence of fibroadenomas and 53% in the incidence of fibrocystic disease.¹¹ Previous users were found to have a reduction of 65% in the incidence of fibroadenomas and 34% in the incidence of fibrocystic disease. Studies using the lower dose oral contraceptive pills have shown a similar decrease in the incidence of benign breast disease.¹²

Concern that the oral contraceptive pill might increase breast cancer continues to be prevalent among U.S. women. A recently-published reanalysis of nearly all of the epidemiologic data available on breast cancer risk and the use of oral contraception included data on 53,297 women with breast cancer and 100,239 controls in 25 countries¹³ showed that the estimated cumulative risk of being diagnosed with breast cancer was not significantly different among women who had discontinued the oral contraceptive pill for more than 10 years compared with women who had never been on the pill.

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The data indicated that oral contraceptive use slightly increased the risk of breast cancer. Breast cancers diagnosed in women on the oral contraceptive pill were found to be localized compared to nonusers, and the survival rate in women on oral contraception was greater than in nonusers.

Rheumatoid Arthritis

Most studies have shown a decrease in rheumatoid arthritis among women on oral contraception. A recent case-controlled study reported a 60% reduction in the relative risk of rheumatoid arthritis in women on oral contraception with the greatest protection found in those with a family history of the disease.¹⁴ A meta-analysis of the literature suggests that oral contraception might not be protective but may inhibit the disease's progression.¹⁵

Acne

Several studies have shown an improvement in acne in women on the oral contraceptive pill. Most recently an oral contraceptive pill was compared to a placebo to determine whether acne was improved in women on the pill.¹⁶ Significant reductions in inflammatory acne lesions and total lesions were noted in women using the triphasic norgestimate/ethinyl estradiol (35 mcg) pill compared with women taking a placebo. These findings resulted in the Food and Drug Administration (FDA) relabeling the indications for the triphasic norgestimate/ethinyl estradiol pill to include treatment for acne. This represents the first time that the FDA has approved a noncontraceptive indication for an oral contraceptive pill. At a recent symposium, the authors of this study also presented data showing that women on this triphasic pill actually lost weight compared to women taking a placebo.¹⁷

Conclusion

The oral contraceptive pill has been extensively studied for more than 40 years, but only recently have studies been published show-

ing an overall improvement in health in women on oral contraception. These health benefits are especially significant in older women since the FDA no longer has an upper age limit for discontinuation of the pill. The significance of the noncontraceptive benefits of the oral contraceptive pill, which include a significant reduction in ovarian cancer, endometrial cancer, pelvic inflammatory disease, benign breast disease, and acne, have led many researchers and physicians to advocate use of the pill even in women who do not need contraception.

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Council Highlights

Friday, June 5, 1998
Roger Kimura MD, Secretary

The meeting was called to order by Dr. P. Chinn, President-elect & Chair at 5:40 p.m.

Present: C. Kelley, Treasurer; J. Spangler, Immediate Past President; A. Bairos, G. Caputy, W. Chang, H KW Chinn, W. Dang, C. Goto, P. Hellreich, C. Kam, P. Kim, A. Kunimoto, C. Lehman, J. Lumeng T. Magoun, J. McDonnell, G. McKenna, W. McKenzie, E. Montell, S. Saiki, M. Shirasu, T. Oldfather, W. Young.

Staff: J. Won, B. Kendro, J. Asato, P. Kawamoto, A. Rogness-recording secretary

Distinguished Medical Reporting Awards: Dr. Lehman, Chair of the Public Relations Committee presented awards for four categories: Television: *Richard Allgire* (KITV News 4) "This is Your Brain on Drugs"; Radio: *Marc Shlacter, MD* (KHVH Radio - The Country Doctor) "Women & Post Traumatic Stress Disorder"; Commercial Print: *Beverly Creamer* (Honolulu Advertiser) "Fight for Her Life" Series; Non-Commercial Print: *Michael Tsai* (HMSA Island Scene) "Ain't Misbehavin". A round of applause was given to all the winners.

Component Society Reports

Honolulu.—Dr C. Goto, President, reported; 1) that their last general membership meeting in April was successful and their next meeting will be on June 16 and will feature a voice dictation system called Dragon Dictate and Roadrunner hookup with Oceanic Cable. The August 18 meeting will be at the Bishop Museum and will feature a Space Exhibit. The October meeting, held in conjunction with the American Cancer Society, will be on smoking cessation; 2) The HCMS is currently revising their bylaws which will be voted on later this year; 3) The date of the HCMS Caucus meeting has been moved from Sept. 15 to Oct. 13; 4) The Mini-Internship Program in May was successful with 7 interns participating.

Hawaii.—Dr T. Oldfather reported that they had a meeting on May 28th. Dr Howard gave a presentation and about 20 members attended.

Kauai.—Dr T. Magoun, President reported that they had a meeting in early May which was well attended.

Maui & West Hawaii.—No report.

Action Taken

- Council voted that the results of the election be released to the membership after being tabulated.
- Council ratified HMA Executive Committee's previous action in favor of the AMA policy which opposes Physician Assisted Suicide.

- A motion was passed by Council to accept the nominations of Dr Glenn Pang as representative to the United States Pharmacopoeial Convention and Dr Gerald McKenna as alternate.
- Council asked Drs P. Chinn, A. Meyers and Mrs. S. Wong, Esquire to draft and disseminate a letter to the HMA membership on the various contracts that are being formed at this time.
- Council asked the Annual Meeting Committee to look at alternative sites for the 1999 Annual Meeting site as the options proposed were not appropriate.
- A motion was passed by Council to hold a bloodbank drive at the HMA Annual Meeting in October 1998.

For Information

AMA Letter to Washington: A letter to Senator Trent Lott written by the acting Executive Director of the AMA, Lynn Jensen was distributed at the meeting. HCFA has made some changes in their guidelines. HCFA now wants physicians to reenroll and pay \$100 for the privilege of providing Medicare services to patients. Another proposal is that doctors will be charged \$1 for every duplicate or unprocessable claim. Physicians would be penalized for resubmitting claims even when payment was seriously overdue or when the contractor has rejected the claim for trivial reasons.

HMA Resolutions: HMA submitted two resolutions to the AMA for the Annual Meeting. The titles are: *Certified Procedural Coders & Protection of Patient Privacy in E&M Guidelines*.

Long Range Planning Committee: Many changes are currently being considered and a final draft of the Long Range Planning Committee report should be ready for the August Council meeting.

HAMPAC: Dr McDonnell, newly elected HAMPAC Chairman, reported that AMPAC membership needs to be increased and encouraged every member of Council to become a member. HAMPAC will be taking a very strong position on candidate support this year. Dr McDonnell will make arrangements to have HAMPAC member stickers available to place on delegate badges at the HMA Annual Meeting this October.

Finance Committee: Drs George Bussey and Charlie Sonido have been appointed to the HMA Finance Committee.

Dr Holschuh for Senator: Dr Montell thanked everyone who supported Dr Holschuh and especially HAMPAC for a generous contribution.

Meeting was adjourned at 7:10 p.m.

BIO NORMALIZER

BIO-NORMALIZER is a cream-colored granular product prepared by fermentation of a select species of Philippine papaya (Cirica papaya).

This semi-natural food product has been tested and documented to control free radicals in the body (redox-regulation). Free radicals are known to be by-products of normal body metabolic processes and play an important role in the body's defense process. However, excessive free radicals in the body can interact with bio molecules such as lipids, proteins and deoxyribonucleic acid (DNA), they can induce the onset or progression of a wide array of pathological conditions including cancers, AIDS/HIV infection, asthma, rheumatoid arthritis, irradiation injury, atherosclerosis and other free radical-mediated diseases.

Even aging is a free radical-associated process.

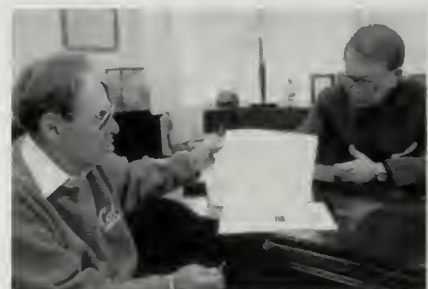
Immuno modulating properties of **BIO-NORMALIZER** have been observed with extensive laboratory research.

The activities of immune cells such as macrophages, neutrophils, natural killer cells and lymphocytes are enhanced. The immune system's ability is strengthened against disease causing agents.

These biological properties of **BIO-NORMALIZER** are considered to be the foundation for it's health giving benefits. Improved quality of life and general well-being is enhanced as a patient recovers in a natural way.

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BIO-NORMALIZER was developed by Dr. James Akira Osato, famed Japanese academician and one of the world's leading professors of biochemistry.



Dr. James Akira Osato
with Dr. Lester Packer of U.C. Berkeley



Learn how **BIO-NORMALIZER** can be part of a new nutritional approach to promote health and improve the quality of life. **Contact Dr. Barry Nutter at 348-3255.**

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Life in These Parts

Hawaii's Top Doctors

(Honolulu Magazine April Issue) Quotes Therefrom

"HMA president **Len Howard** said, 'We wish that lists such as these weren't published at all...Unless there is something we don't know about the methodology, we don't think it's representative. What readers, including the HMA want to know is how the doctors make the list...and why some very good doctors may not be listed.'"

(Len complained that Woodward/White did not poll all the doctors in Hawaii...). Apparently Woodward/White starts by polling top medical centers nationwide, asking doctors at those institutions to name the top physicians there, in order to get a seed list. These doctors are then asked to name the best doctors in their respective specialties. The doctors on the larger list are asked, 'If a friend or loved one needed a doctor in your specialty and you couldn't treat them yourself, to whom would you refer them?' And doctors who earned the most support from their fellow doctors made the list...(Len Howard asked suspiciously, 'Do people get on the list if they buy an ad?')

What follows is a list of 167 Hawaii physicians, about 2% of the doctors in the state. Because of the referral method employed, the list is admittedly biased toward physicians at larger teaching hospitals and those specialists who see a large number of complex cases."

(P.S. We agree with Len Howard...We don't think the list is representative of the true quality of physicians in Hawaii...With our apologies to those listed, of course...)

Assisted Suicide

Source NEJM (3,102 doctors in 10 specialties surveyed)

36% would write prescriptions for lethal dose of medication, if legal.

11% would write prescriptions under current legal constraints.

18% have received requests for assistance.

3.3% have written prescriptions for lethal dose of medication.

24% would give lethal injection if legal.

7% would give lethal injection under current legal constraints.

11% have received a request for lethal injection.

4.7% have given lethal injections.

Robert Mayer, president of the American Society of Clinical Oncologists urged that physicians be well trained in end-of-life care, "not just know how one alleviates pain, but how one talks to family members."

Letters to the Editor

(Star-Bulletin, March 23, 1998)

"Damn all legislators who, for the hopeless, have failed to open the path for induced sleep, to eternal rest in peace—Damn all legislators who condone the forded nourishment of the spiritually

dead, those pathetic, mindless creatures, helpless with senile dementia.

When age brings death of the mind, death of the body will soon follow naturally, if there are no administrations by others.

To avoid that extension of misery, society should make euthanasia a legal, optional civil service that is mandatory when competent decision is unavailable.

That may be playing God, but it is humane and better than delaying body death, often for years, with cruel tube feeding, etc..."

Paul Gebauer (Retired thoracic surgeon)

Medical Tidbits

(Dr Fitness: by Chet Nierenberg)

Ddx Sprain and Strain:

Strain = injuries to muscle and sometimes connective tissue.

Sprain = injuries to ligament.

- First degree:

Mild stretching of interstitial fibers; Rx: elastic wrap, ice, anti-inflammatory agents.

- Second Degree:

Partial tear of muscle or ligament. Sy's: swelling, pain, stiffness and ecchymosis (2 or 3 days later) Rx: cast, brace, PT (6 wks to 6 mos)

- Third degree:

Complete rupture of muscle or ligament.

Rx: Surgery followed by brace and PT (1 yr for full function)

Potpourri

Inconceivable

Joe is a precocious 7-year-old boy conceived by artificial insemination. His father had a son, Andy, from a previous marriage but a subsequent vasectomy had rendered him infertile.

His mother and I were attempting to explain to Joe the intricacies of AI, and how the doctor had obtained the sperm from a donor who resembled him.

After his mother had done mental gymnastics reassuring him that he was very wanted, Joe looked up and asked, "How come they had to use another man's sperm? Did Daddy use it all up on Andy?"

(Dr Thomas Barnett in Stitches, March 1998)

That Pesky Prostate

I had just finished taking Mr Jones' blood pressure when he asked if I would have time to check his prostate. He'd been hearing a lot about prostate cancer on the radio and at age 42 felt he should have it checked.

I agreed and pulled a glove out of the drawer and began to put it on. As I looked back at him I could see a stricken look on his face.

"What are you doing?" he asked.

"Well, I'm getting ready to examine your prostate," I said.

"Don't you just need to use a light?"

"No, I use my finger to feel the gland," I explained.

"Isn't the prostate gland right here?" he asked,

pointing at the base of his throat.

"No it's actually at the other end" I said.

With no further ado, he bolted from my examining room, never to be seen again!

Dr Teresa Cordoni in Stitches, Feb 1998

Conference Notes

"Aggressive Medical Rx of Hyperlipidemia"

(John S. Schroeder MD, Prof. of Medicine, Stanford Medical School; Hawaii Lipid Symposium 1998; Sat., May 2, 1998; Hilton Hawaiian Village)

A. Epidemic of CAD in USA

Begins in childhood...Doesn't occur in countries with low fat diet, e.g. Asian countries. (Dietary saturated fat raises serum cholesterol).

Stanford 25 mg Plan:

- Less dairy fat
- Less meat fat
- Limit hidden sources of saturated fat

B. Lipid Lowering Trials

4S: • 30% reduction in overall mortality

- Lowers CVA mortality
- Reduces PTCA & CABG

CARE: (Post MI pts)

• LDL-C <100: 24% reduction CVA; 27% reduction CABG & PTCA

WOSCPS: 22% reduction total mortality (Pravastatin)

Lovastatin Trial: 36% reduction major event; ↑ coronary revascularization; reduction of first acute major coronary event.

C. Medical Rx of CAD

• Start statin on Day 2; LDL lowering improves endothelial function; restores EDRF; lowers monocyte adhesion; ↑ vasodilation; stabilizes plaque.

D. Update on LDL Rx (Secondary Prevention)

- Rx all pts
- Start statin immediately upon dx
- Give statin as evening dose
- Increase dose q monthly;
- Couple with < 25 gm Saturated Fat & > 25 gm fiber diet

*Ideal Levels: TC 150 - 160; LDL 60 - 80

E. Statin Drugs

re Statin Side Effects:

- Check liver enzymes during 1st year
- Don't stop Statin even with ↑ LFT's;
- Myositis: rare; "I don't check CPK"

F. Primary Prevention

- Treat most diabetics and hypertensives.
- Premenopausal women have high HDL and are protected...but screen and educate even premenopausal women
- Unstable angina pt: Tell family to come in fasting next day and take their lipid profiles...

G. Current Recommendations

- Diet:



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- European View on Prevention
- Prevention in the Developing World
- Health Care in the 21st Century

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| ■ Chronic Lung Disease | ■ Infectious Disease |
| ■ Cancer | |

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- Do Wellness Programs Cut Health Care Costs?
- Community Resources
- Is Prevention and Screening Worthwhile? Who Should Pay the Bill?
- Panel Discussion - Recommendations for Health Care

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- 25 gms sat fat for 1° prevention
 15 - 20 gms sat for 2° prevention
- Target Levels: Use statin drugs to achieve lipid levels; ↑ dose q 4 - 6 wks prn
- | | | |
|-----|-----|-----|
| | 1° | 2° |
| TC | 200 | 160 |
| LDL | 100 | 80 |
- Antioxidants:
 Vit E 400 IU
 Vit C 500 mg
 - HRT for post menopausal women:
 Estrogens 0.625 mg; Progestin 2.5 mg
 - ETOH 1-2/d
 - Exercise 30 min every day
 - Once-a-day CA blocker for angina
 - Once-a-day CA blockers or ACE inhibitors for hypertension
 - New: enteric coated 81 mg ASA

- H. Schroeder Recommends:**
- Screen lipids: both men and women q 5 years
 - Educate the food buyer re saturated fat
 - I don't treat with "statin" before age 18
 - Primary Prevention: Treat every single diabetic and hypertensive
 - Men with positive family hx should be treated

Charlie
(He was a kindly doctor with a short fuse) Excerpts therefrom

On one particular day, an aged farmer and his pale wife were shown into Charlie's impressive office, and sat down. After finishing his notes on the previous case, Charlie looked up. "What's the problem?" he asked. The farmer shifted in his seat and replied, "She's old and tired and low, Doc."

Then followed one of those interchanges in which the farmer, although trying his best, couldn't give the correct answer.

- "What is she complaining of?"
- "Nothing, Doc, she's not one to complain."
- "Well, what brought you here?"
- "We came on the bus."
- "But what's wrong with her?"
- "That's what we've come to find out."
- "Does she have any pain?"
- "Yes."
- "Where?"
- "Everywhere."
- "When?"
- "All the time."

After 30 minutes of completely non-productive history taking, Charlie was ready to blow. He began to go red in the face. His jaw muscles tightened, his hands started a fine tremor. He put down his pen, and in a grim voice he started, "Is there anything wrong with her forehead? With her eyes? Is there anything wrong with her nose? Her lips, her mouth? And so he moved down the body, item by item. The farmer replying in the negative to each question. When the negatives were complete, Charlie picked up his pen and wrote, "History—Negative" He then examined the patient. After a careful exam and blood work, Charlie knew he was beaten. When the farmer and his wife were sitting back in front of him again, he picked up his pen and wrote: "diagnosis—Old and tired and low."

by Dr John Cocker, publisher of Stitches

Classified Notices

To place a classified notice:

HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in HMJ as space is available.

Nonmembers.—Please call 536-7702 for a nonmember form. Rates are \$1.50 a word with a minimum of 20 words or \$30. Not commissionable. Payment must accompany written order.

Misc.

Mask & Glove Relief.—Sensitivity barrier gel reduces irritation from latex, nitrile, polyethylene face masks & gloves. Free evaluation sample to USA physicians (1 per office). Sahara Cosmetics Oahu 808-735-8081, USA toll free 1-877-280-2020, record complete delivery address.

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Pearl City Business Plaza.—Tenant Improvement Allowances for Long Leases; 680+ sq ft; 24-hr security; free tenant/customer pkg; Gifford Chang 581-8853 DP, 593-9776, 531-3526.

Internal Medicine Practice for Sale.—Liliha area, convenient location, X-ray, Lab, Pharmacy in building. Call 533-3808.

Mana Institute Bldg in Kakaako.—Turn-key office available for full-time or part-time use. Laboratory, radiology, and nuclear medicine on site. Call Bill Spencer at 592-2643.

Hilo Medical office Space.—Largest Specialist office ideal for ENT, Neurologist, Orthopedics, Gastroenterologist, Podiatrist, Operating Suite on Premises. Will trade for office time in Honolulu or rent/very flexible. Contact Pacific Surgical Associates Inc. 1-808-961-3330.

For Sale

Moving to New Office - Medical Equipment For Sale.—3 exams tables (various sizes), stainless steel Mayo stands and trash cans, exam lights, wheeled stools, x-ray filing system (floor to ceiling, book shelf size), metal desk, and other equipment. Call Miche 536-0139 or Alma at 523-9922.

Printer for Sale.—Brand New HP Desk Jet 670 color printer. \$150/offer. Call Nelson at 536-7702, x2220.

Sale of Medical Equipment.—2 medical exam tables, Burdick EK-5 EKG, Centrifuge, Zeiss Binocular Microscopes w/case, 2 treatment tables, filing cabinets, audioscope & 3freq/hearing screening, tympanometer, copy machines, 2 fax machines, 2 sec'ty chairs, 4 waiting room chairs, 1 large professional table, Titimus vision tester, Lanier hand-held microcassette recorder & transcription machine w/ case, FAA EKG transmission modem, 2 physical therapy tanks and hot packs (1 holds 10-12 packs & 1 holds 4 packs) and many more practical office items. Call (808) 395-7334.

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Everything is agreed upon about marijuana except what is true.

With so many medications in the glaucoma pharmaceutical armamentarium, would you feel the need to prescribe cannabis? No? But, if a person is one-eyed with loss of the fellow eye to glaucoma, has had multiple surgical failures on his remaining eye, is loaded up with medications, and still has pressures beyond control, would you then resort to the weed? In an effort to provide the public with appropriate response to what is being pushed in legislatures, eye researchers are striving to understand the mechanism of action and effectiveness of cannabis. Very little is known about how marijuana works. Studies are contradictory and based upon outmoded technologies. Which tissues are the relevant receptors, and does the drug act to retard production of aqueous or increase outflow? Moreover, the length of action is about three and 1/2 hours, too short to be accepted for any present commercial agent. Yet the drumbeat goes on, prodded largely by those who wish to see the drug legalized for both therapy and recreation.

Freedom is the will to be responsible to ourselves.

A new and enlarging number has sprouted in the Medicare garden. According to preliminary data from the Health Care Financing Administration, to date 278 practicing physicians have signed affidavits to opt out of Medicare and privately contract with their patients. Congress and HCFA, which have striven so diligently to avoid a "two tier" medical care system, by their own rules are forcing more people into that very structure. The constantly mounting pressure to drive the elderly into HMOs, combined with the paper avalanche rolling over the independent physicians, amounts to a coercive mechanism to simply force doctors into alternatives. Therefore when possible, more and more doctors will give up on Medicare. The savings on time and staffing alone will go a long way to make up whatever loss might ensue, so many doctors will simply do a non-Medicare practice.

Barring that natural expression of villainy which we all have, the man looked honest enough.

A surgeon infected with human immune virus (HIV) failed to reveal his health status to a patient on whom he performed two operations. Although she did not get the infection, the Illinois woman and her spouse claimed damages from the estate of the now deceased doctor. The appellate court ruled that she is entitled to sue for negligent infliction of emotional distress, and her husband can sue for loss of consortium. Even so, it appears the couple are still somewhat better off than the doctor.

So much of what we call management consists in making it difficult for people to work.

More turmoil in the health care business is illustrated by the current problems of *PhyCor*, the medical management company with heavy interests on Maui and Oahu. The giant medical management company is currently confronting the 150 doctor Holt-Krock Clinic in Fort Smith Arkansas, where the doctors are in open revolt. More than half of the doctors voted to renegotiate or dissolve their ties with *PhyCor*. The company has balked, so 38 of the physicians have sued to get out of their contracts, and to void the clause on restriction to set up a competing practice within a 30-mile radius. The claim is that *PhyCor* is not doing enough to earn the 15% management fee, and has delivered less than was promised. The doctors at Holt-Krock were making good money before *PhyCor* came along, but they could not resist the offer of easy capital. However, as Medicare and third parties have reduced reimbursement, some doctors have seen their incomes plunge by 30% or 40%. Because the clinic was already run efficiently, the promised cost savings have not materialized, and the clinic has been saddled with paying an extra \$50,000 a month for a new computer system. At the same time, *PhyCor* has had to restructure or sell seven of its 55 clinics, and in Jacksonville, Florida, about half of the 110 physicians have resigned from the system.

To some extent, modern medicine has succeeded in vulgarizing death.

Oregon voters passed a controversial law authorizing physician-assisted sui-

cide. So far, at least two Oregonians have taken advantage of the state's *Death with Dignity Act*. A task force of health professionals representing 25 health care organizations has developed a 91 page guide to help doctors deal with the ethical, legal and logistical challenges which accompany the law. Some of the items in the guidebook are: (1) a review of drugs that can be lethal, (2) how to assess the patient's request to end life, (3) how to help patients contact pharmacists who are willing to dispense drugs that can be used to end life, (4) instruct physicians who are opposed to the law to willingly transfer records to another doctor at the patient's request. The booklet is entitled *The Oregon Death With Dignity Act: A Guidebook for Health Care Providers*. Copies of the guide are available at \$15 each through the Center for Ethics in Health Care, Oregon Health Sciences University, 3181 S.W. Sam Jackson Park Road, L-101, Portland, Oregon 97201.

No government has ever been wherein time-servers and blockheads are not uppermost.

If doctors conducted business like the Health Care Financing Administration they would be publicly condemned, and probably end up in debtor's prison. The Administration is instructing carriers to immediately switch to "automated response units (answering machines) for provider claims status inquiries. The agency recognizes that this action will cause you to miss claims processing timeliness requirements..." what this amounts to in simple terms is a slow down in payments, placing an additional burden on physicians who care for Medicare patients. Also, HCFA is threatening to eliminate the toll-free number and other benefits for participating physicians. Any wonder that some doctors are opting out?

Be careful if you want cheap medical care. You may get it.

The Luntz Research Companies conducted a poll for the *Patient Access to Specialty Care Coalition*, and found that Americans overwhelmingly want Congress to protect patient's rights. "It doesn't matter what background we examined, the public is frustrated with managed care and want changes," according to Luntz. Most Americans in HMOs believe that health care in the U.S. has deteriorated, which is a logical conclusion based upon the HMO desire to "go cheap." If a medical organization provides non-physician practitioners for basic care, manipulates or denies referrals, dictates hospitalizations, over-subscribes the plan, and underserves the patients, that organization can contract cheaply with insurers (Medicare) and still make large profits. However, it must be recognized that patients are not so stupid that they will continue to tolerate such brand X health care. Congress should pass legislation mandating that Medicare patients receive the same medical coverage as members of Congress provide for themselves.

Few things are harder to put up with than the annoyance of a good example

In this era of non-heros, one Senator stands tall. Arizona's John McCain has not endeared himself to fellow Senators on either side of the aisle with his dynamic proposed reforms on campaign financing. It would make honest politicians out of them. Everyone should read Annapolis graduate Robert Timberg's *The Nightingale's Song* for a recognition of the unbounded courage and integrity of John McCain while he was a prisoner of war in Viet Nam. Most recently, he chaired the Senate committee which has constructed a tobacco bill that also gets to the heart of that problem, and is deemed too strong by the tobacco defenders. The industry-funded *National Smokers' Alliance* is attacking the bill and Senator McCain, whom many believe would be the best GOP candidate for President in 2000.

Addenda—

- ❖ In 1993 Miller Brewing Co. donated \$150,000 to the Thurgood Marshall Scholarship Fund, and spent \$300,000 promoting the gift.
 - ❖ Ancient Egyptians shaved off their eyebrows as a sign of mourning when their cats died.
 - ❖ Are hemorrhoids above the arctic circle called polaroids?
- Aloha and keep the faith — rts ■

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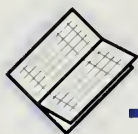
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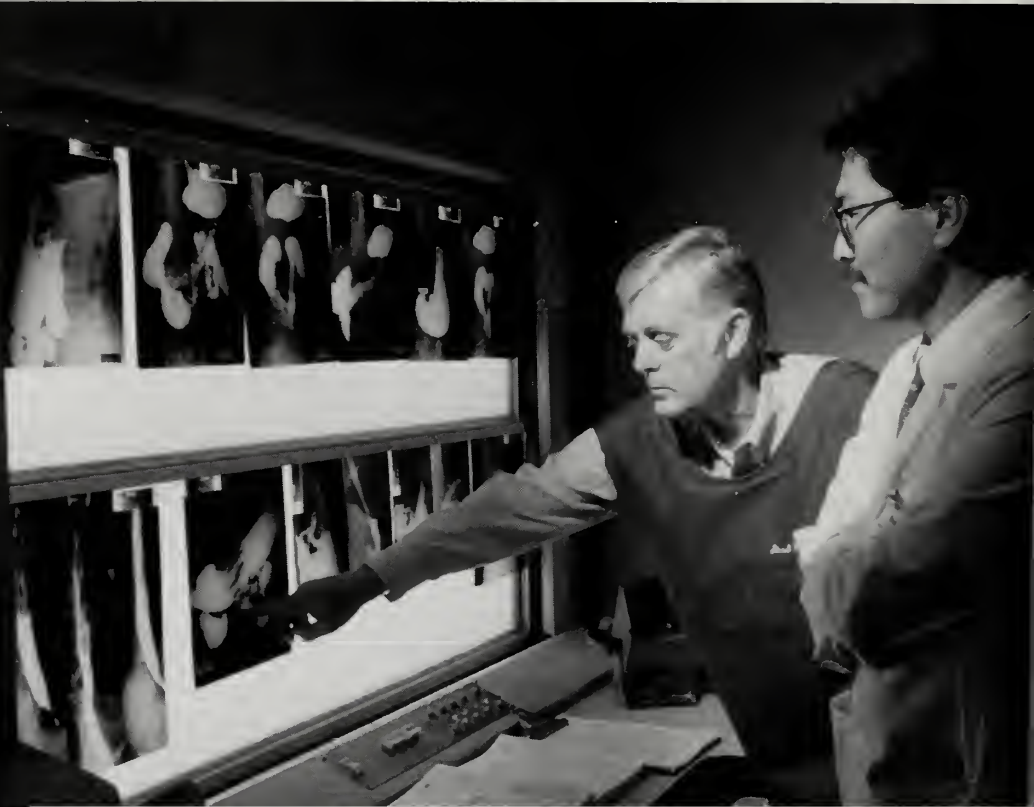


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Editorial

The "Silent Epidemic" Traumatic Brain Injury

Norman Goldstein MD

Gary Okamoto MD, MPH is the Medical Director of the Rehabilitation Hospital of the Pacific. He is also an Associate Clinical Professor of Medicine at the John A. Burns School of Medicine as well as Medical Director of the Department of Rehabilitation Services at the Queen's Medical Center.

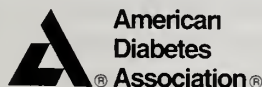
In his very busy practice of physical medicine and rehabilitation (physiatry), his patient population includes those with physical and cognitive disabilities caused by stroke, spinal cord injury, amputation, cerebral palsy, paralytic polio and traumatic brain injury. When Dr Okamoto was asked to serve as Guest Editor for this Special Issue on Brain Injury, he received so many excellent manuscripts that we were planning to publish them in two issues. But, thanks to our many advertisers, we are able to offer this entire special issue under one cover.

Next month, look forward to another pain manuscript, "Cancer Pain Guidelines: Are They Being Used?" by Patricia Kalua, RN, member of the Pain Task Force convened by the Governor and directed by Dr Gary Okamoto.

**Norman Fetner
lost his leg, but didn't
lose his life.**



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Guest Editor

Gary Okamoto MD, MPH

Governor Ben Cayetano has proclaimed October 1998 as the *Prevent Traumatic Brain Injury and Family Violence-Induced Brain Injury Awareness Month*. To heighten the awareness of our physician readership, local experts have been invited to contribute a series of articles about traumatic brain injury (TBI) in Hawaii. In this special issue of the *HMJ*, these articles have been published, creating an awareness of effective social, behavioral, and cognitive strategies to help patients disabled by TBI.

One may legitimately ask "Why such attention to TBI, a clinical entity with only prevention as its cure and disability as its complication?" The answer may be found in thinking of TBI as fundamentally a "social disease." Consider the common predisposing factors such as family violence, alcoholism, drug abuse, motorcycling without helmet, unsafe ladders, and competitive sports. Each factor can be avoided or certainly modified.

At the other end of this social disease, understand that TBI can inflict permanent physical, cognitive, and behavioral disabilities that can be and are easily overlooked, ignored, or ineffectively managed by conventional medical models of service. These disabilities can consume an enormous amount of health and medical-related resources and account for the unspoken but hemorrhaging long-term costs of this high risk patient population in Hawaii. Thus, the attention over TBI as a social disease is driven largely by the real potential to prevent its occurrence and a socio-economic need to manage the irreversible effects of TBI with appropriate health services and outcomes.

Each contributor leaves us physicians with a challenge to do more and better for our patients disabled by traumatic brain injury. Faced with these challenges and prepared by new information found in this special issue of the *HMJ*, we are able to prescribe selective and specialized help for TBI-patients locally. Going one step further, we can join our patients and their families in making every month an awareness month for traumatic brain injury.

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Medical School Hotline

Student Profile: Class of 2002 at the John A. Burns School of Medicine

**Satoru Izutsu, PhD, Associate Dean
Chair, Admissions Committee**

The Class of 2002 will begin its first day in medical school on August 5, 1998. Twenty-five women and thirty-three men will make up the 32nd entering class and the 10th class to undertake their medical education in a format titled, "PBL-Problem Based Learning."

There were one thousand ninety-eight applicants for forty-eight slots. Of this number, 226 qualified academically to be interviewed. In addition, ten graduates from the Post-Baccalaureate Program, *Imi-Ho'ola*, joined the class for a total of 58 new students. The *Imi-Ho'ola* Program addresses diversity and those who are educationally, socially, and economically disadvantaged.

The average age of the entire class is 24.4. Fifty-three are Hawaii residents and 5 are non-residents (3 mainland states, 1 Guam and 1 from Japan.).

Of the 125 medical schools in the United States, the John A. Burns School of Medicine is the most ethnically diverse. In the new class, there are 18 Japanese, 9 Chinese, 8 Hawaiians, 8 Filipinos, 4 Caucasians, 3 other Asians, 1 Korean, 1 Vietnamese, 1 Hawaiian Afro-American, 1 Hispanic, and 1 Indian. Three students did not respond to the question of ethnicity.

Seventeen are graduates of Hawaii colleges (16 from University of Hawaii at Manoa and 1 from Hawaii Pacific University). Seventy-one percent or 41 are graduates of mainland colleges which include Universities of Washington, Cornell, Stanford, UCLA, Dartmouth, Pomona, Brandeis, Brown, Gonzaga, Hampshire, Marquette, MIT, San Diego State, Sarah Lawrence, Smith, Colorado at Boulder, Denver, Illinois, Maryland College Park, Oregon, Texas at Austin, University of California at Berkeley, University of California at Santa Barbara, University of California at San Diego, University of California at San Francisco, University of California at Irvine, and University of Southern California.

All of the students possess Baccalaureate Degrees: 6 have Masters Degrees and 1 holds a degree in Jurisprudence. Fifteen were Biology majors, 6 majored in Psychology, 2 each in Economics, Liberal Arts/Liberal Studies, 2 in Microbiology and one in each of the following: Anthropology/German, Biology/Asian Studies, Biology/ Psychology, Biology/Public Policy Analysis, Biology/Biomed Ethics, Biology/Biomed Science, Biology/Epidemiology, Biology/Management, Nursing, Biology/Psychology, Biomed Engineering, Chemical Engineering, Chemistry, Cybernetics, English, French, Health Sciences, History, Human Biology, International Studies, Journalism, Music-Drama, Neurosciences, Physical Therapy, Physics/Biology, Physiology, Political Science/Law/General Science, Psychobiology, Sports Medicine, and Zoology.

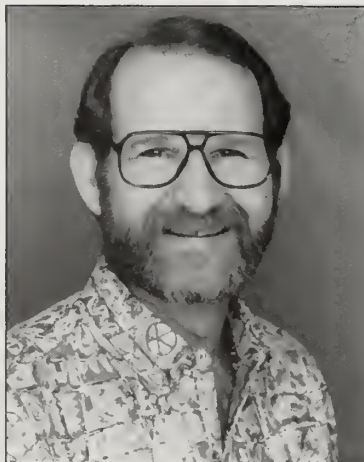
The ten-member 1998 Admissions Committee was composed of equal numbers of male and female members. They represented the clinical, basic, and social sciences and most of the major ethnic groups in Hawaii as well as a variety of age levels. The Committee convened from September through mid-May.

The Admissions Committee rated a total of 240 (including the *Imi Ho'ola* candidates for the 1999 Post-Baccalaureate Program) through a secret ballot. The candidates were ranked to determine the 58 candidates for admission and the alternates. The rating of each candidate is determined after examining the following documents: Hawaii residency status, academic scores (Grade Point Averages and scores from the Medical College Admission Test-MCAT), interviews, essays that address the questions, "Why medicine?" and "Why the John A. Burns School of Medicine?", letters of recommendations, a biographical sketch and transcripts from the American Medical College Admission Service (AMCAS). Credits are awarded for clinical/health-related experiences (i.e. employment, community services, volunteerism) and related research/graduate studies. All applicants are interviewed by the Chair of the Admissions Committee who is also the Associate Dean of the School of Medicine.

The entering class's MCAT scores are competitive with the national norms (the 1997 national norms are in parenthesis). JABSOM students scored: Verbal Reasoning—9.14 (7.8); Physical Science—9.97 (8.1); Writing Sample—Q/R (Q); Biological Sciences—10.21 (8.4). (Note: scores cited for JABSOM students are from the 1995, '96 and '97 test results since MCAT Scores are valid for three years for admission to JABSOM.)

Each student is assigned a faculty advisor who maintains contact with him/her throughout the years in medical education. Students are strongly advised to seek the counsel of their advisors.

The members of the class of 2002 are on their way to becoming physicians. They have been selected to ensure that they have the potential to complete training in medicine. In addition, those selected possess the capacity not only to become competent scientists but achieve mastery in the art of healing and comforting their fellow human beings.



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†Double-blind, comparative clinical studies have not been conducted to evaluate comparative efficacy.

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The antimicrobial action may be attributable to inhibition of microbial cellular protein synthesis. A normalization of keratinization leading to an anticomedonal effect of azelaic acid may also contribute to its clinical activity. Electron microscopic and immunohistochemical evaluation of skin biopsies from human subjects treated with AZELEX[®] demonstrated a reduction in the thickness of the stratum corneum, a reduction in number and size of keratohyalin granules, and a reduction in the amount and distribution of filaggrin (a protein component of keratohyalin) in epidermal layers. This is suggestive of the ability to decrease microcomedo formation. **Pharmacokinetics:** Following a single application of AZELEX[®] to human skin *in vitro*, azelaic acid penetrates into the stratum corneum (approximately 3 to 5% of the applied dose) and other viable skin layers (up to 10% of the dose is found in the epidermis and dermis). Negligible cutaneous metabolism occurs after topical application. Approximately 4% of the topically applied azelaic acid is systemically absorbed. Azelaic acid is mainly excreted unchanged in the urine but undergoes some β -oxidation to shorter chain dicarboxylic acids. The observed half-lives in healthy subjects are approximately 45 minutes after oral dosing and 12 hours after topical dosing, indicating percutaneous absorption rate-limited kinetics. Azelaic acid is a dietary constituent (whole grain cereals and animal products), and can be formed endogenously from longer-chain dicarboxylic acids, metabolism of oleic acid, and ω -oxidation of monocarboxylic acids. Endogenous plasma concentration (20 to 80 ng/mL) and daily urinary excretion (4 to 28 mg) of azelaic acid are highly dependent on dietary intake. After topical treatment with AZELEX[®] in humans, plasma concentration and urinary excretion of azelaic acid are not significantly different from baseline levels. **INDICATIONS AND USAGE:** AZELEX[®] is indicated for the topical treatment of mild-to-moderate inflammatory acne vulgaris. **CONTRAINDICATIONS:** AZELEX[®] is contraindicated in individuals who have shown hypersensitivity to any of its components. **WARNINGS:** AZELEX[®] is for dermatologic use only and not for ophthalmic use. There have been isolated reports of hypopigmentation after use of azelaic acid. Since azelaic acid has not been well studied in patients with dark complexions, these patients should be monitored for early signs of hypopigmentation. **PRECAUTIONS: General:** If sensitivity or severe irritation develop with the use of AZELEX[®], treatment should be discontinued and appropriate therapy instituted. **Information for patients:** Patients should be told: 1. To use AZELEX[®] for the full prescribed treatment period. 2. To avoid the use of occlusive dressings or wrappings. 3. To keep AZELEX[®] away from the mouth, eyes and other mucous membranes. It does come in contact with the eyes, they should wash their eyes with large amounts of water and consult a physician if eye irritation persists. 4. If they have dark complexions, to report abnormal changes in skin color to their physician. 5. Due in part to the low pH of azelaic acid, temporary skin irritation (pruritus, burning, or stinging) may occur when AZELEX[®] is applied to broken or inflamed skin, usually at the start of treatment. However, this irritation commonly subsides if treatment is continued. If it continues, AZELEX[®] should be applied only once-a-day, or the treatment should be stopped until these effects have subsided. If troublesome irritation persists, use should be discontinued, and patients should consult their physician. (See ADVERSE REACTIONS.) **Carcinogenesis, mutagenesis, impairment of fertility:** Azelaic acid is a human dietary component of a simple molecular structure that does not suggest carcinogenic potential, and it does not belong to a class of drugs for which there is a concern about carcinogenicity. Therefore, animal studies to evaluate carcinogenic potential with AZELEX[®] Cream were not deemed necessary. In a battery of tests (Ames assay, HGPRT test in Chinese hamster ovary cells, human lymphocyte test, dominant lethal assay in mice), azelaic acid was found to be nonmutagenic. Animal studies have shown no adverse effects on fertility. **Pregnancy: Teratogenic Effects: Pregnancy Category B.** Embryotoxic effects were observed in Segment I and Segment II oral studies with rats receiving 2500 mg/kg/day of azelaic acid. Similar effects were observed in Segment II studies in rabbits given 150 to 500 mg/kg/day and in monkeys given 500 mg/kg/day. The doses at which these effects were noted were all within toxic dose ranges for the dams. No teratogenic effects were observed. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed. **Nursing Mothers:** Equilibrium dialysis was used to assess human milk partitioning *in vitro*. At an azelaic acid concentration of 25 µg/mL, the milk/plasma distribution coefficient was 0.7 and the milk/buffer distribution was 1.0, indicating that passage of drug into maternal milk may occur. Since less than 4% of a topically applied dose is systemically absorbed, the uptake of azelaic acid into maternal milk is not expected to cause a significant change from baseline azelaic acid levels in the milk. However, caution should be exercised when AZELEX[®] is administered to a nursing mother. **Pediatric Use:** Safety and effectiveness in pediatric patients under 12 years of age have not been established. **ADVERSE REACTIONS:** During U.S. clinical trials with AZELEX[®], adverse reactions were generally mild and transient in nature. The most common adverse reactions occurring in approximately 1-5% of patients were pruritus, burning, stinging and tingling. Other adverse reactions such as erythema, dryness, rash, peeling, irritation, dermatitis, and contact dermatitis were reported in less than 1% of subjects. There is the potential for experiencing allergic reactions with use of AZELEX[®]. In patients using azelaic acid formulations, the following additional adverse experiences have been reported rarely: worsening of asthma, vitiligo depigmentation, small depigmented spots, hypertrichosis, reddening (signs of keratosis pilaris), and exacerbation of recurrent herpes labialis. **DOSAGE AND ADMINISTRATION:** After the skin is thoroughly washed and patted dry, a thin film of AZELEX[®] should be gently but thoroughly massaged into the affected areas twice daily, in the morning and evening. The hands should be washed following application. The duration of use of AZELEX[®] can vary from person to person and depends on the severity of the acne. Improvement of the condition occurs in the majority of patients with inflammatory lesions within four weeks. **HOW SUPPLIED:** AZELEX[®] is supplied in collapsible tubes in a 30 gm size: 30 g - NDC 0023-8694-30. **Note:** Protect from freezing. Store between 15°-30°C (59°-86°F). **Caution:** Federal (U.S.A.) law prohibits dispensing without a prescription. Distributed under license, U.S. Patent No. 4,386,104

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Announcements

Research Competition on Filipino Health: Call for Abstracts

The Philippine Medical Association of Hawaii and Pharmacare are offering cash prizes for original research on the health issues of Filipinos in Hawaii. First place is \$400 and second place \$200.

The research must be previously unpublished, and must be presented in the form of a poster at the annual meeting of the association at the Turtle Bay Hilton on May 29, 1999. Authors may come from any professional field (physicians, medical students, nurses, epidemiologists, pharmacists, therapists, etcetera), in training or in practice, and may be of any ethnicity. The abstract submission deadline is January 31, 1999.

For complete instructions and an abstract form, please contact Dr Theresa Danao-Camara, 522-3863, voice mail 522-4488 ext. 3863, fax 522-3523.

Pacific Conference on Brain Injury October 1 - 3, 1998

Traumatic Brain Injury is the focus of the *Pacific Conference on Brain Injury* scheduled for October 1 - 3, 1998 at the Sheraton Waikiki Hotel. The conference will feature nationally respected speakers including 1985 airline hostage survivor Jackie Pflug. The conference will convene experts on brain injury treatment, management and prevention—encompassing the physical, psychological, educational, vocational, and social aspects of brain injury services from point of injury through community reintegration.

Day one of the conference will focus on family violence and brain injury prevention. The subsequent two days will address the continuum of care—specifically, medical and clinical interventions; prevention and policy; and community reintegration issues.

For more information, contact the Rehabilitation Hospital of the Pacific at 566-3451 (Mel Devera).

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Proclamation

WHEREAS, two of the major public health epidemics in Hawaii and the nation are family violence and Traumatic Brain Injury (TBI); and

WHEREAS, for those who survive, brain injury is a life-altering experience -- with serious physical impairments and a variety of cognitive, behavioral and emotional complications that include violent and aggressive behavior; and

WHEREAS, TBI is the most expensive of all disabilities, with an estimated cost of \$4-6 million for health care and social services over the lifetime of a severe injury survivor; and

WHEREAS, family violence victims seek health care eight times more frequently than non-violent families; and

WHEREAS, the head area is a primary target in violent attacks on women and children, resulting in cumulative TBI disabilities and fatalities for which there is no cure; and

WHEREAS, with prevention as a highly desired goal, it is essential to heighten public awareness of the consequences of brain injuries that can be induced by violent family relationships; and

WHEREAS, in order to reduce the number of brain impairments caused by violence -- and to meet Hawaii's health objectives for the Year 2000 -- we must break the intergenerational cycle of child abuse and domestic violence;

NOW, THEREFORE, I, BENJAMIN J. CAYETANO, Governor of the State of Hawaii, do hereby proclaim October, 1998, to be

BRAIN INJURY AWARENESS MONTH

in Hawaii, and urge our citizens to join with those in our community who are working to eliminate incidents of abuse that can lead to Traumatic Brain Injury.

DONE at the State Capitol, in the Executive Chambers, Honolulu, State of Hawaii, this twenty-fourth day of June, 1998.

Benjamin J. Cayetano

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Deep Pockets or Blueprint for Change: Traumatic Brain Injury (TBI) Proactive Strategy

D. William Wood, MPH, PhD*; Sandra Pohl, MSW, MPH**;
Sharon Lawler MD***; Gary Okamoto MD****

The Pacific Conference scheduled for October 1-3, 1998, is a critical event in the development of an integrated community-based plan for a comprehensive continuum of services to address the "silent epidemic," Traumatic Brain Injured (TBI). This paper provides insights of the complex nature and the special problems faced by the TBI survivors; their families, natural supports and caregivers, as well as the health, social and educational care providers in Hawaii. Process for the development of the community plan is presented.

Unless we are willing and able to remove all risks from our day to day lives, Traumatic Brain Injury (TBI) will continue to occur. Nationally, every 17 seconds a person sustains a TBI. It has become the number one killer and cause of disability in the United States.¹ Approximately 2 million Americans experience moderate to severe TBI every year. About half of these cases result in short-term disability, fifty-two thousand people die, and seventy thousand to ninety thousand endure lifelong multiple loss of functions. An additional two thousand will exist in a persistent vegetative state.²

The number of individuals with brain impairments is increasing significantly. As recently as the early 1980's nine out of ten died, but

in the 1990's nine out of ten survive due to new medical technology, aggressive patient management, and quick effective emergency response at the point of injury and in the trauma center. Long known as the "silent epidemic," everyone is at-risk—any age, any time, any place. The major causes of TBI are motor vehicle accidents (50%), sports accidents (10%), falls (21%) and firearms (12%) and other reasons (7%). Alcohol is an associated if not a causal factor of TBI: 50% of persons were intoxicated at the time of injury.³

The Cost of Brain Injury

Brain injury is a life-long disability, with no cure. It also does not just go away. It is considered the most expensive disability with the life-time estimated cost for one severe injury at \$4 to \$7 million. This is about 5 times more than the life-time costs of treating one severe spinal cord injury. In addition, annually there is an estimated 10,000 spinal cord injuries compared to the 2 million TBI.³

Families and survivors of TBI quickly use up their limited health insurance coverage and soon after exhaust their personal resources. Impoverished by their large outstanding bills from the health care facilities, they often default in payments leaving health care providers unpaid. Disabled and impoverished, survivors apply for Medicaid or Medicare benefits to pay for their health care needs. If ineligible for public assistance however, they may go without medical attention until their secondary disabilities develop into more extensive preventable medical-social complications.

The Brain Injury Association of Kentucky identifies another factor to the crisis which will be faced by every state and the nation in the near future. The caregivers are older and are more frail and dying, their abilities to continue providing home care has diminished. The crux of the problem is the demand for more resources to meet the long term care needs of the aging brain impaired population as well as their aging caregivers.³

The health care system has experienced major unforeseen consequences impacting the existing costly infectious disease trauma-based system. This means that relying on the existing system alone is not feasible because the survivors and their families are already financially weakened. They will be unable to sustain the provision of needed resources in the long term. The same is likely true for other disability groups.

Federal Law Encourages Community Involvement

The Traumatic Brain Injury Act, P.L. 104-166, 104th Congress (1996) established a national program to promote basic and applied

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research with respect to prevention and to minimize the extent and the severity of impairments caused by TBI. The program also offered grants to states for establishing demonstration projects in the form of matching of two dollars for every dollar appropriated by the state. The TBI projects will foster person and family centered care which requires: involvement of survivors and their families in all phases of the TBI continuum of care; clear and continuous communication between family members and the care teams; attention to the psychosocial needs of survivors and family members; and cultural competence of the providers.⁴

What is TBI?

The federal statute (PL 104-166), defines TBI as an acquired injury to the brain, a broad category that includes other neurological disorders. However, it does not include brain dysfunction caused by congenital or degenerative disorders, nor birth trauma, but may include brain injuries caused by anoxia due to near drowning. TBI is different from other brain injuries as the damage happens during what may well have been normal development; it happens suddenly, bringing significant changes immediately; damage is usually diffuse, widespread, and not confined to one area of the brain.⁴

TBI can be caused by an external mechanical force or motion to the head region. An open brain injury caused by a foreign object penetrating the skull and lodging in the brain (an example is a gunshot wound.) A closed Brain Injury occurs when the head accelerates and then rapidly decelerates by violent smashing, shaking, stretching, and twisting of brain tissue; the nerve endings connecting the skull to the brain are often torn or may become completely separated.⁵ Examples of closed head injuries are whip-lash or shaken baby syndrome.

Simple Bump on the Head or is it TBI?

Due to the lack of emergency, most mild and moderate TBI injuries are not noticed or diagnosed, and often it is assumed everything will be okay — life as usual when the pain goes away. Survivors may appear to be fine with no obvious physical symptoms, but the cognitive, social, emotional, behavioral losses of function and the changes in personality are very real.³ The brain injuries that require medical attention are often discharged from the emergency room with few instructions and minimal follow-up. This only indicates that the patient has no gross symptoms or reactions and is medically stabilized at the time of the examination. Survivors and their support system sense something is not quite right but do not relate the changes with the brain injury. They seek acute health care and report their symptoms without mentioning the injury. Uninformed or unaware of brain injury, the health care providers and professionals unintentionally may make diagnosis and referrals to inappropriate treatment. This only adds to the cost of care as well as cause additional confusion and stress to the family and support systems.

Brain Impairments are Unique with Every Person

Unlike other disabilities, there is no diagnostic criteria to rule out brain impairments. Each brain injury survivor requires an individual assessment and evaluation because of the very subtle multiple deficits in one or more areas in different degrees and the extent of the injury. The symptoms include: hypersensitivity to stimulation,

metabolic and neurological disorders, sexual dysfunction, sleep disturbance, fatigue, lethargy, cognitive problems of short and long term memory deficits, speech/language impairments, learning disabilities, difficulty with perceptions, concentrating, reading and writing, impaired executive functions i.e. plan, make judgments and think quickly as well as understand complex issues. There are also the psychosocial-behavioral-emotional consequences such as irritability, aggression, violent reactions, restlessness and anxiety, lack of spontaneity, childishness, apathy and depression, mood swings, denial, self-centeredness, lack of ambition, indecision, lowered self-esteem, sexual disinhibition, difficulty with emotional control, unable to develop personal relationships, excessive emotions (i.e. laughing, swearing, or crying), etc.⁵ These symptoms are similar to other primary diagnosis (mental illness, behavior disorders, chronic fatigue syndrome, etc.) Often these diagnosis are used without any reference to the organic dysfunction due to tissue damage.

Pediatric TBI is Different from Adult TBI

The National Pediatric Trauma Registry identified brain injury as the most frequent diagnosis reported and the leading cause of death and disability in children and adolescents: one million children are taken into emergency rooms each year with brain injuries.

For children, the neurological consequences of an injury to their undeveloped brain most often have negative results on future education, vocation and the quality of life as they mature, develop and live their normal life spans. Brain impaired students have unique considerations for community reintegration. The brain impaired have tendencies to “absorb” the behaviors exhibited by those around them and they very often cannot generalize what they have learned in one situation to another, etc.³ In addition, for children and young adults some dysfunctions develop when physical maturity requires functions from the injured parts of the brain.

The majority of students return to school with different educational and emotional needs from their pre-injury development. Although students with TBI may seem to function much like children born with other handicapping conditions, but the unexpected disability resulting from trauma is very different. TBI Children can often remember how they were and what they could do before the injury. This can result in significant emotional, psychosocial and relationship problems not usually present in children born with disabilities. Further the trauma impacts family, friends and professionals who remember the pre-injured child. Everyone grieves the loss of functions and potential often without hope of recovery. Confused and frustrated, the caregivers and natural support system have difficulty in shifting and adjusting to the changes as a result of the injury and the increase demands on care giving.⁷

Educational Implications

Unidentified and not evaluated, students with TBI are too often inappropriately classified as having learning disabilities, emotional disturbances, or mental retardation, mental illness, etc. As a result, the appropriate medical, educational and related services to address the brain injury may not be prescribed.⁸

TBI is a separate disability within special education. The schools are held responsible to provide children and youth with access to and funding for neuropsychological, speech and language, educational, and other evaluations necessary to provide the information needed

for the development of an appropriate individualized educational program (IEP). According to Debosey, careful planning for school reentry (include linkages between the trauma center/rehabilitation hospital and the special education team at the school) is extremely important in meeting the needs of the student's successful community reintegration and regaining functions to be on track with their developmental and educational tasks as well as catch up with their peers.⁹

Need for Medical Self-Sufficiency

Hawaii is unique in that, unlike other states it is located in the middle of the Pacific Ocean, 2,300 miles away from the continental United States and is comprised of island counties. The distance between the islands and from the mainland U.S. isolates residents from easily accessing and exchanging services and resources of any neighboring communities.

The augmenting of the state's 1.3 million residents by over six (6) million tourists annually also creates unique service delivery problems. The year round mild climate increases the risk of preventable TBI from outdoor and recreational activities of both residents and tourists. Because little opportunity exists to learn of the unique personal behaviors, baseline brain activity and because tourists engage in higher risk activities on vacation then in their normal lifestyles, the complexity of their trauma cases is intensified. Finally, the cultural differences within the multi-ethnic communities and their associated lifestyles, the social services and health care models from elsewhere do not seem appropriate for Hawaii. Thus, the development of sustainable solutions relying on the islands' self

sufficiency is essential.

Like most other States, the TBI community's (survivors, families and caregivers) needs are only now being addressed through the Federal initiatives and the availability of matching grant funds.

Gross Underestimation of TBI

The Healthy People Hawaii 2000 Objectives, the National Health Promotion and Disease Prevention Objectives reported the incidence of moderate and severe brain injuries is similar to other states.¹⁰ A 1997 Hawaii Health Information Corporation report identified approximately 1,200 TBI discharges from Hawaii's hospitals annually of which 2/3 were residents and 1/3 tourists. These patients are distributed across twenty of the State's 22 health care facilities with acute care capacity. Fourteen percent are children ages 0-14 years; 43% are ages 15-44. Over the period 1993 through the first quarter of 1996, the average cost per discharge was \$22,048. The total hospital cost for the emergency room or initial acute hospital admission for the TBI discharges are estimated at \$26.6 million per year.¹¹ The numbers do not account for the admissions with other primary diagnosis, the mild to moderate brain injuries that did not require medical attention and those already living in the community with TBI related disabilities. The required funds and resources needed to treat Hawaii's TBI survivors under the present system cannot be seen to meet the known and unknown need.

TBI Advocacy

During the 1997 Legislative session, the Hawaii Medical Association (HMA), the Brain Injury Association of Hawaii formerly

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known as the Pacific Brain Injury Association (PBIA), the University of Hawaii School of Public Health (UHSPH), the Hawaii Nurses' Association (HNA) and the many TBI advocates were able to provide convincing data to the Legislatures. The growing political-will to develop local solutions is indicated by the unanimous votes in both houses of the State Legislature and the Governor signing Act 333 relating to TBI on July 2, 1997. In addition, the 1998 Hawaii legislature appropriated state funds to match federal or other private foundation funds.

Community Challenge—Opportunities for Collaboration

The purpose of the community planning process is to identify needs, resources and local solutions through citizen participation. The success of the planning process will reflect genuineness of the communication, cooperation, coordination and collaboration between the public and the private sectors.

Reality of Private-Public Partnerships

These are difficult financial times in which to create a continuum of services given the State's fiscal constraints, the outcry for downsizing government and reduction of the state's income projections. The cost of acute care and long term care, managed care cost containment policies also exacerbate the problems and increase the public burden (cost). With the shortage of resources and the growing need, can Hawaii continue providing services without a plan? The choices are to 1) continue as is, 2) break the bank with band aid

approaches, or 3) develop a proactive strategy for an integrated comprehensive continuum of care for all individuals with brain impairments and support services for their families and caregivers statewide.

HMA Committee for Neuropsychology

Committee for Neuropsychology — Hawaii Medical Association Community Research Bureau was formed in 1996 to address the gaps in services. The members of this public-private coalition include: Hawaii Medical Association, Brain Injury Association of Hawaii formerly the Pacific Brain Injury Association, Department of Health Neuropsychology Services at the State Hospital, The Department of Education Special Education Services, University of Hawaii School of Public Health and the Department of Psychology, and families/caregivers. The committee is establishing the Hawaii Neuropsychological Community Research Bureau, as an education, research and development infrastructure for cost-effective neuropsychology programs. In addition, they have also collaborated with other agencies to sponsor educational forums for the general public, the TBI community, health care and education professionals.

The Committee on Neuropsychology has the freedom and flexibility to expand or contract as the need grows or shrinks. The vision is to develop diverse local solutions that are built on real private-public partnerships to do "whatever it takes" to meet the needs of its partners to provide family and survivor centered care.

What's the Problem

There is a need to have a more accurate count of the individuals with brain impairments who need special services to implement the size of programs and type of services. The comprehensive assessment survey developed by Federal Health Resources and Services Administration, Maternal Child Health Division (HRSA/MCH) will be modified to account for the unique ethnic demographic distribution. The assessment will be distributed to the following groups as defined by HRSA/MCH: 1) TBI survivors, 2) family members, 3) service providers, 4) private and public agency administrators. This assessment process will supplement other data collection efforts.

"Barefoot Epidemiology"

The Community Epidemiology Work Group (CEWG)¹³ process will provide rough estimates of incidence and prevalence rates. But more importantly, the CEWG will create opportunities for the stakeholders to discuss the problem, and participate in a process of consensus building. The CEWG is an effort that has been well defined in the field of substance abuse.¹³ Known as "barefoot epidemiology," it relies on the knowledge and information from those "who ought to know" as a primary source of information.

The primary purpose of the CEWG is to build a foundation for the interaction of providers and researchers in a non-threatening environment with the intent of identifying what we know and what we need to know. Health care professionals and their agencies share information that was previously viewed as proprietary. This coalition is vital in reinforcing the need for "standardized" methods of case determination, a minimum data set for individuals with TBI, and an overall improvement of data collection. No attempt is made to develop precise prevalence rates since the data provided simply



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do not lend themselves to that precision. Instead, prevalence ranges and estimates of what might be made. This process brings the stake holders together to build the infrastructure for the TBI surveillance system in the state.

Second, the information collected provides an invaluable tool for professionals in the community to plan cost effective services for the needs of individuals with TBI as well as provide all organizations within the community a resource for referring TBI cases to providers of care.

Third, Hawaii has a mix of ethnic communities who may have differing prevalence rates of TBI as well as differences in socioeconomic status, age, and gender. To provide Hawaii's residents with more effective health promotion and disease prevention programs, it is important to understand the magnitude of the problem within the ethnic community and to determine what factors shape health behaviors.

The CEWG data will be paralleled with an analysis of the consolidated inpatient data as well as available outpatient data. Finally, data from the state emergency medical system will be factored in to complete the basic data for the assessment of services to identify the profile of unmet needs and useful information related to prevalence rate determination. It will also provide information to: 1) develop a monograph on TBI in Hawaii; 2) encourage researchers to identify research projects for future grant applications and 3) implement cost effective demonstration projects with strong evaluation components to self correct the programs.

Understanding is Critical to Informed Choices

The role of all education in the development of the comprehensive TBI program cannot be emphasized enough. In fact, this may be the one area where substantial change can be instigated in a short period of time. Educational improvements may be more human related technology and less reliance on expensive high technology medical care.

Teaching survivors and caregivers leadership, advocacy and coping skills will encourage cooperation and smoother dynamics. The survivors and their caregivers are able to ask the right questions, participate as a member of the trans-disciplinary care team providing the needed care and involved in making informed choices. This skills development and information dissemination strategy is a simple cost-effective means of improving the system.

TBI education may also alter the environment in which more expensive and extensive inter-related program components will later evolve such that the medical community, allied health professionals and the community at large may understand and be willing to facilitate and advocate for positive change.

Start Somewhere Sometime

The start of the planning process begins on October 1-3, 1998 with the Pacific Conference on Brain Injury focusing on prevention of Family Violence Induced Brain Injuries and the Continuum of Care. The first progress report, tentatively scheduled for October 1999, will make recommendations for no cost public policy changes and other proposals to increase access for services without sacrificing the quality of health care.

Impact of Community Proactive Strategy

In the end, a community and its government are judged by how they address the civic responsibility for the health and well-being of all citizens. The community involvement gives citizens the power to direct the public sector in how best to utilize resources for a more responsive government. The private sector has the flexibility to develop new small businesses and new jobs to fill the needs as identified during the process.

The implementation of an action plan may save considerable sums of money. The current practice of discharging the brain injured by health insurance authorization criteria of sicker and quicker, only to have them return because of complications. With effective rehabilitation, survivors may regain functions quicker and is ready for earlier discharge to lower costs community based services to transitioning back to independent living.

This practice of discharging severe to moderate brain impaired survivors from the acute care system (acute rehabilitation costs of \$20,000 to \$30,000 per month), and transferring to less expensive community based services, (residential rehabilitation costs of \$7,000 to \$15,000 per month) will save money in the long term. In addition the survivors live in the least restrictive environment moving through the community based continuum of care to achieve their highest potential and an increased quality of life.

"Hawaii the Health Care Center of the Pacific."

Nationally, the TBI industry is the fastest growing and most profitable niche medical sub-specialty. This is one way of diversifying our economic base by providing specialized appropriate and effective brain impaired services provided by the private sector. The State of Hawaii has the infrastructure and professional leadership to become the pioneers in brain injury treatment, education, training and research development. "Hawaii the health care center of the Pacific" is possible. The support to develop community-based partnerships that build "Centers of Excellence," requires support from all sectors of the community. The added benefit is the money will stay in the community multiplying by a factor of 2.1 and in turn generate more state income.

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Pity and Compassion Are Not Enough

Frederick C. Holschuh MD

In the September, 1996 issue of the *Hawaii Medical Journal*, I ended a commentary article on violence with a quote I attributed to a young girl from Los Angeles. The physician who mentioned this was from Los Angeles. He is Dr Reed Tuckson, now with the AMA, and the quote was actually from a 12-year-old girl from a youth theatre group in Washington, D.C. She said, "pity and compassion in a world of pain, means nothing unless it leads to change." This bit of wisdom sums up what should be the driving force behind our efforts to combat the epidemic of violence in America. Aside from the crucial and immediate need to care for the injured victim and keep him or her safe, nothing is more important than mobilizing a massive campaign of prevention, education, public awareness and intervention in troubled families long before violent events occur. The heightened level of awareness must be targeted as well to physicians, nurses, office and ER staff, police, and prosecutors, paramedics and judges. Dr Shay Bintliff has been very outspoken and appropriately so, in teaching physicians the correct ways to ask the questions. Not: "who beat you up?" but "are you safe at home?" All of us who've worked in ERs for a long time have gone through attitudinal changes from feeling that the victim must "ask for it" or she would leave, to recognizing the terrifying effects of living with daily fear. Mr Casey Gwinn, the San Diego prosecutor, said at a conference in Hilo two years ago that victims should never be asked if they want to press charges. You don't ask a bank after a robbery if they want to press charges. The act of violence should not be looked at, as in years past, as a "family matter" but rather as a matter between a jurisdiction and the perpetrator of a violent crime.

The Big Island leads the State in the rate of cases of abuse of dependent adults and children and the rate of TROs (temporary restraining orders) against perpetrators of violence. I have worked in the ERs on the Big Island since 1972, mostly in Hilo. There is no doubt in my mind that although it is not an "excuse" for domestic violence, the abuse of alcohol and other drugs contribute greatly to the commission of acts of violence. One must also look at the effects of poverty, and lack of jobs and self-esteem. I also feel that TV and movie violence has a definite effect, particularly in young people, on the ease with which a violent act is committed. We must also consider the relationship between a child or adult who commits violence and the environment in which they live and grow. In some cases, this begins in the womb with the damaging effects of alcohol and other drugs on the fetus, with actual brain trauma from beatings, with being victimized and with the devastating role model witnessed on a daily basis by many children growing up in a home racked by violence and abuse.

I spoke recently at a Rotary club meeting in Kona and was thinking of cases of family violence I've personally cared for in the Hilo ER, as well as, murdered partners that Diane and I know personally. My memory is crowded with reflections of the terror in the swollen eyes of a woman whose face is broken, bloody and pulpy, the woman with the shattered forearm, one covered head to toe with bruises and lacerations and a young woman with multiple torturous, superficial knife lacerations all over her body, including a 6-inch laceration across the throat. That one was carefully inflicted while her hair was held—it came close to killing her but was meant to terrify her.

Another troublesome episode involved a 12-year-old boy who was grabbed when he attempted to stab someone in the chest. He is the product of a chemically damaged pregnancy. An 18-month-old boy I saw recently, best emphasizes the message of awareness of violence and brain injuries. This boy, now in foster care, came to the ER with an ear infection. He is severely brain injured, can't talk, sit upright or feed himself. I remembered caring for him when he was brought in at age 2 or 3 months having been starved and beaten by those he trusted.

This pitiful little boy, with a BROKEN BRAIN, best sums up the problem. Not only must we consider the terrible human suffering, but also the monumental costs of caring for someone this disabled. It is my opinion, we are just seeing the tip of the iceberg in terms of the amounts of family and stranger violence that will result from poverty, alcohol and other drug abuse and exposure of the unborn to the devastating effects of alcohol and other drugs.

A few positive comments. I am hearing in meeting with advocates and from word of mouth, that more networks of "safe houses" for victims are being formed. There is more awareness in the community. In Hilo, we are very proud of our advocate call system in the ER. I have long believed in mandatory reporting to police of incidents of violence, but we understand the fears of victims when the police are called against their will. We have policy now at Hilo Medical Center that provides for calling victim advocates and offering their counsel to victims in the ER. I feel that is working very well in providing the foundation of safety and support for victims.

So in this month of awareness of the costs of traumatic brain injuries, let us heed the advice of that 12-year-old girl from D.C. Let us couple our pity and compassion with the will to approach the epidemic of family violence like we would any major epidemic: emphasizing public awareness, education, prevention and sound treatment. As Dr Jeff Goldsmith once said, physicians in America clean up wrecks of life styles at the bottom of a cliff. It's time to build the safety net at the top of the cliff.

Achieving Better Outcomes for Hawaii's Children

Sandra Potter Marquardt, MPA*

Act 333, adopted by the State Legislature in 1997, notes that traumatic brain injury is the leading cause of death and disability in children and young adults. While Act 333 requires the Department of Health to develop a comprehensive plan to address the needs of persons affected by disorders resulting from such injuries, it is clear other more preventative measures must be taken to deal with this problem.

These are trying times for Hawaii's families. The lingering economic slump and predominance of low-paying service sector jobs, unemployment figures on the rise, and the high cost of living continue to test our resiliency. Providing the kind of care and attention children need to thrive is particularly challenging under such stressful circumstances. Indeed, recent reports of infant deaths and traumatic brain injuries resulting from child abuse have many concerned that a growing number of families may not be coping well at all, and that despite a shrinking state budget, somehow we must do more to help children at risk.

Act 333, adopted by the State Legislature in 1997, notes that traumatic brain injury is the leading cause of death and disability in children and young adults. While Act 333 requires the Department of Health to develop a comprehensive plan to address the needs of persons affected by disorders resulting from such injuries, it is clear that this issue calls for additional preventative measures to deal with this problem.

The need to be proactive about child safety becomes even more urgent in light of recent discoveries about the significance of early brain development. In the last several years, research findings have underscored the fact that more learning and growth take place in the first two years than at any other time of life. Recent studies, such as the one released by the Rand Corporation, reinforce what we have intuitively realized all along - that the kinds of experiences that infants and toddlers are exposed to have a lasting impact. Quality care and nurturing will pave the way for a lifetime of successful learning. Conversely, prolonged exposure to severe stress can actually change the physiological development of a child's brain leading to learning handicaps and other developmental delays.

In Hawaii we pride ourselves on how the state's public policy reflects our love of children. We do not want to sacrifice the gains

we have made on their behalf, despite the gloomy financial news. With this in mind, a coalition of community leaders, state legislators, and public and private agency representatives have been grappling with ways to make the most of existing resources. In the face of shrinking human service budgets, we must develop innovative approaches which will help shift cost from expensive intervention and treatment services to more economical prevention programs that have a positive impact on child outcomes.

During this past legislative session, lawmakers and the Cayetano Administration acted on several measures that will bring people together to take collective action on important child outcomes. In particular, House Concurrent Resolution 38 establishes a state policy and a recommended course of action for improving the well being of children, youth and families.

The document draws from a number of statewide initiatives to define a continuum of good outcomes for children from the time of birth through young adulthood. For example, "Every child will thrive physically - be healthy from birth with ongoing access to good health care, have a safe home, school, and community environment" is generally accepted to be a fundamental requirement for all children to thrive. It acknowledges that "the majority of children and youth are mentally and physically healthy because they grow up in loving sustaining families where the care of children is viewed as a fundamental responsibility, however, all families need supportive communities and some families need more support than others to assure good outcomes for their children."

Providing appropriate support to enable communities and families achieve these outcomes will take a more focused approach than in the past, and the resolution prescribes a means to do so. It calls for communities and public and private services providers to think strategically about ways they can combine resources and energies to address common goals. It also calls for the development of a mechanism to measure progress on achieving the desired results for families over time and for government as well as private, non-profit agencies to cooperate on gathering and sharing data that will make this possible. Thus, the resolution helps set the stage for the creation of "performance partnerships" for the state.

The Office of the Governor is very committed to the concept of performance partnerships, an idea that is being promoted by the federal government, through the National Performance Review Board and Vice President Al Gore's Office. The National Performance Review Board is currently developing mutually beneficial agreements with a number of leading states in order to pursue key outcomes that are important to those states and federal government.

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Vocational Rehabilitation of People with Traumatic Brain Injury

Tony Hunstiger MEd, CRC* and Gunnar Thompson PhD**

The role of the vocational rehabilitation counselor in the rehabilitation process for individuals with TBI is explained. The specialized evaluation, team-orientation, and services involved are described. Eight areas involved in vocational evaluation are noted: social support, vocational / educational, independent living, medical, behavioral / psychosocial, financial, legal, and other areas.

Recent advancements in emergency trauma care and physical rehabilitation offer hope of survival to people who sustain brain injuries. As encouraging as that may be, vocational interests of those with traumatic brain injury (TBI) can not be overlooked. Rehabilitation services are not usually readily available or affordable for most people. It is this unavailability of adequate life-long care programs for persons with chronic impairments that seems to be the major problem facing survivors of TBI.¹ Vocational readjustment can play a major role in optimal medical recovery, psychological adjustment, and long-term quality of life.

A vocational consultant may be added to the treatment team at any point where immediate vocational decisions must be made regarding the patient's employment status or where long-range vocational goals might provide a suitable foundation for psychological adjustment. A vocational evaluation is begun as soon as the individual with TBI is mentally and physically prepared to begin the tasks of

physical and cognitive rehabilitation. This evaluation considers the pre-injury occupation along with a current assessment of skills, interests, and limitations.

When the patient is ready, a return to work program is initiated to begin the process of gradually resuming work-related activities. Through the coordinated efforts of physical therapist and vocational counselor, long-term vocational goals can often serve as a framework or incentive for patient effort. The timing, method, and goals for work-related activities are generally summarized in a document called the "vocational rehabilitation plan".

Because of the complex consequences associated with TBI, vocational assessment and planning require a team effort involving client, family, physician, neuropsychologist, vocational rehabilitation counselor, physical therapist, occupational therapist, and other appropriate parties. The rehabilitation plan serves the purpose of establishing a framework for coordinating team efforts. Patient status is monitored in all crucial phases, and the plan is modified to suit changing contingencies and unforeseen opportunities. Family involvement is recommended in all phases of the rehabilitation process, along with the support, and coordination of all team members. Since research indicates the need for (a) unique evaluation techniques, (b) team-oriented rehabilitation planning, (c) team-oriented therapies, and (d) support services formulated specifically for TBI survivors, it is necessary for case managers (i.e., vocational rehabilitation counselors) working with this population to develop specialized knowledge, skills, and resources.²

A team of specialists with a representative from each relevant discipline should be gathered. A team leader is then identified from among the specialists gathered. Treatment goals are prioritized according to the client's needs. A schedule for evaluating treatment is established on the basis of objective outcomes, which are expected at prescribed intervals based on the patient's usual level of functioning. Failure to attain expected outcomes provides a basis for re-evaluating client abilities and re-adjusting the long-term program. The provision of care across all levels of treatment is monitored for continuity. An outcome orientation is promoted; and, ideally, long-term management and support systems are put in place.

Some aspects of vocational rehabilitation, such as vocational evaluation, neuropsychological, and psychological assessment are specific to the vocational rehabilitation component of TBI rehabilitation. Other aspects of TBI rehabilitation, such as cognitive remediation, psychotherapy and social skills training overlap with the vocational rehabilitation process. These aspects of rehabilitation include the assessment of key barriers to employability and community reentry after brain injury, which are the effects of psychological

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and cognitive changes. These changes are often more profound than physical changes.³ Vocational rehabilitation provides training not only in job skills, but also in appropriate workplace behaviors. It provides an effective means of restoring a sense of identity to a person with a brain injury. In this regard, vocational rehabilitation should be viewed as a major part of the overall rehabilitation process.

An assessment of the client's needs is an elementary component of any initial vocational rehabilitation, case management or life-care planning interview. These needs generally fall into the following inter-related categories: (1) a social support system, (2) vocational and/or educational assistance, (3) independent living, (4) medical, (5) behavioral management / psychosocial, (6) financial, (7) legal, and (8) other areas of concern. In this process of life care planning, nothing should be left to chance; and, everything important in the TBI survivor's life should be considered openly and in depth with active participation by all involved.⁴ This list of aspects of life is used to analyze an individual client's needs so that they can be prioritized and included in their vocational rehabilitation plan. The use of this framework simplifies the vast array of complex and overlapping aspects of TBI rehabilitation making them more manageable.

A social support system, or the lack of one, establishes the alternatives available to a TBI survivor upon discharge from acute care. This category may be the most important in terms of promoting optimal rehabilitation for a person with an injury: "people do better and heal faster when they feel that somebody cares about them."⁵ Lack of social contact, increased dependence on the family, and a

reduction in close friends, leisure activities and visitors is a frequent concern of post-injury clients.⁶

Without assistance from family, friends, community and/or a competent guide, such as a vocational rehabilitation counselor, the survivor may not receive needed chronic care. Lacking the skills necessary to care for themselves, persons having TBI may become a social burden by becoming homeless, institutionalized, or jailed. Access to the other seven categories on the life-care-planning list above might be impossible without fundamental social support.

As the incidence of brain injury among young people is known to be very high, return to school is often a serious concern after injury. Awareness regarding TBI by educators and school counselors and awareness of students and their parents of services available to them needs to be increased. For most young adults, return to work or school is usually a desirable and potentially attainable goal.

Vocational evaluation as part of the transition from school to work comes under the auspices of the State-Federal vocational rehabilitation program. State counselors use a variety of assessment techniques including simulated job tasks such as standardized job samples, trial work stations or "situational assessments" in addition to neuropsychological evaluations as the basis for an adult rehabilitation plan. Persons who are injured on the job qualify for assistance from counselors who are certified with the workers' compensation program. Finally, some individuals covered by automobile insurance receive vocational counseling assistance under the terms of vocational rehabilitation coverage. However, financial constraints often limit the availability of skilled counseling or other services for persons with chronic disability.

Vocational evaluation involves an assessment of an individual's assets and limitations along with a prediction of the individual's behavior and success on the job. Vocational evaluation encompasses the full repertoire of work behaviors with a focus on the manner in which deficits interfere with vocational functioning. A determination of maximum capabilities and mechanisms to optimize performance is necessary. On-the-job evaluation is preferable to standardized group testing and commercially available work samples for this population.⁷

The vocational counseling component usually involves helping a person with a brain injury develop a realistic vocational outlook. Frequently, people with brain injuries, overestimate their vocational potential, with the consequence that their vocational goals are unrealistic. Further, they typically underestimate the amount of work or the extent of the capabilities needed to achieve their goals because they lack self-awareness and do not accept the consequences of the injury. Vocational rehabilitation counselors work closely with professionals attending to the psychological adjustment. They can recommend work-related activities to help the person with the brain injury become aware of the reality of their relationship to the work environment.

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The use of antibiotic agents may be associated with the overgrowth of nonsusceptible organisms including fungi. If this occurs, discontinue use and take appropriate measures.

Avoid contact with eyes and all mucous membranes.

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1. This medication is to be used as directed by the physician. It is for external use only. Avoid contact with the eyes, nose, mouth, and all mucous membranes.

2. This medication should not be used for any disorder other than that for which it was prescribed.

3. Patients should not use any other topical acne preparation unless otherwise directed by physician.

4. Patients should report to their physician any signs of local adverse reactions.

5. BENZAMYCIN® Topical Gel may bleach hair or colored fabric.

6. Keep product refrigerated and discard after 3 months.

CARCINOGENESIS, MUTAGENESIS AND IMPAIRMENT OF FERTILITY

Data from a study using mice known to be highly susceptible to cancer suggests that benzoyl peroxide acts as a tumor promoter. The clinical significance of this is unknown.

No animal studies have been performed to evaluate the carcinogenic and mutagenic potential or effects on fertility of topical erythromycin. However, long-term (2-year) oral studies in rats with erythromycin ethylsuccinate and erythromycin base did not provide evidence of tumorigenicity. There was no apparent effect on male or female fertility in rats fed erythromycin (base) at levels up to 0.25% of diet.

Pregnancy; Teratogenic Effects; Pregnancy Category C: Animal reproduction studies have not been conducted with BENZAMYCIN® Topical Gel or benzoyl peroxide.

There was no evidence of teratogenicity or any other adverse effect on reproduction in female rats fed erythromycin base (up to 0.25% diet) prior to and during mating, during gestation and through weaning of two successive litters.

There are no well-controlled trials in pregnant women with BENZAMYCIN® Topical Gel. It also is not known whether

BENZAMYCIN® Topical Gel can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. BENZAMYCIN® Topical Gel should be given to a pregnant woman only if clearly needed.

Nursing Women: It is not known whether BENZAMYCIN® Topical Gel is excreted in human milk after topical application.

However, erythromycin is excreted in human milk following oral and parenteral erythromycin administration. Therefore, caution should be exercised when erythromycin is administered to a nursing woman.

Pediatric Use: Safety and effectiveness of this product in pediatric patients below the age of 12 have not been established.

ADVERSE REACTIONS

In controlled clinical trials, the total incidence of adverse reactions associated with the use of BENZAMYCIN® Topical Gel was approximately 3%. These were dryness and urticarial reaction.

The following additional local adverse reactions have been reported occasionally: irritation of the skin including peeling, itching, burning sensation, erythema, inflammation of the face, eyes and nose, and irritation of the eyes. Skin discoloration, oiliness and tenderness of the skin have also been reported.

DOSAGE AND ADMINISTRATION

BENZAMYCIN® Topical Gel should be applied twice daily, morning and evening, or as directed by a physician, to affected areas after the skin is thoroughly washed, rinsed with warm water and gently patted dry.

How Supplied and Compounding Directions:

Size (Net Weight)	NDC 0066	Benzoyl Peroxide Gel	Active Erythromycin Powder (in Plastic Vial)	Ethyl Alcohol (70%) To Be Added
11.65 grams (as dispensed)	0510-05	10 grams	0.4 grams	1.5 mL
SAMPLE				
23.3 grams (as dispensed)	0510-23	20 grams	0.8 grams	3 mL
46.6 grams (as dispensed)	0510-46	40 grams	1.6 grams	6 mL

Prior to dispensing, tap vial until powder flows freely. Add indicated amount of ethyl alcohol (70%) to vial (to the mark) and immediately shake to completely dissolve erythromycin. Add this solution to gel and stir until homogeneous in appearance (1 to 1½ minutes). BENZAMYCIN® Topical Gel should then be stored under refrigeration. Do not freeze. Place a 3-month expiration date on the label.

NOTE: Prior to reconstitution, store at room temperature between 15° and 30°C (59° – 86°F).

After reconstitution, store under refrigeration between 2° and 8°C (36° – 46°F).

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Vocational training focuses on job performance tasks and behaviors. This includes skill proficiency, rate, quality and endurance. It includes equally the development of appropriate on-the-job behavior. A flexible training program using behavioral techniques with presentation of tasks in small, sequential steps along with a gradual shift to self-monitoring is recommended.⁸

Job development and job placement approaches vary according to job readiness and severity of injury. A client may start with volunteer work, move to supported employment with a job coach and finally hold a job independently. "Supported employment" is so named because special trainers called "job coaches" assist individuals with handicaps as they learn complex tasks on the job site; or, co-workers are trained to assist the person to keep on track or to assume those job tasks that are beyond the TBI worker's competency. Return to work options are as broad as the labor market, but are defined by the person's work and educational history, physical and mental abilities, aptitudes, interests, and needs.

Research has consistently shown a decrease in employment rates after brain injury in relation to pre-injury employment rates; furthermore, unemployment is often a long-term problem due to relatively minor behavior-cognitive deficits.⁹ With special and intensive forms of intervention, however, employment outcomes can range from 50% to 80% for clients with even a severe TBI. Although job placement is possible, sustained job retention is a lingering concern.¹⁰ Follow-up after job placement is, thus, important with this population. Monitoring of activities and assistance with situations may be necessary for some time after placement to insure work skills and behaviors are appropriate. Typically, six months to one year is suggested.

Before return to work is possible, basic supports may be needed. The support services for independent living most needed by persons with moderate to severe TBI are: (a) personal assistance services, (b) homemaker/chore support, (c) home health services, (d) respite services, (e) housing, (f) case management or resource coordination, (g) transportation, and (h) advocacy. The three obvious barriers that impede the delivery and utilization of these needed supports are funding, attitudes, and housing. If lack of funding is a problem, a case manager can help direct the person with TBI and their family to sources other than individual insurance like Social Security and Medicaid. Where an attitudinal barrier is a problem; the widely held opinion that persons with disabilities cannot or should not live independently often means a more restrictive lifestyle in a "safer environment" than is needed or desired by the individual. When there is no affordable housing, it is often less expensive to place individuals in nursing homes instead of in more appropriate community based independent living arrangements.¹¹

Most medical insurance policies cover only hospital-based rehabilitation, and not chronic care. The hospital team must, therefore, deliver the most comprehensive, high-quality treatment before the person is discharged from the hospital. In order to obtain this goal, Howard calls for an inter-disciplinary approach rather than a multi-disciplinary approach. A few significant differences between the inter-disciplinary model and the multi-disciplinary model are: a behavioral-learning treatment model, not a medical treatment model; an emphasis on mental, not physical treatment; chronic care, not an acute care model; group control with a democratic team leader, not centralized control with an autocratic team leader; a common goal among the disciplines, not separate goals; a focus on the whole

patient, not on rehabilitating parts of the patient; and group problem solving in staff meetings instead of individual reporting.¹²

Any discussion of the support system, the vocational/educational rehabilitation, the activities of daily living of the person with TBI, or the medical aspects of the person with TBI must deal with managing the behavior of the person with TBI. The rebuilding of social skills is often necessary to allow the human contact vital to all other concerns. The behavioral and cognitive aspects of TBI are not physically obvious, yet they are often most severely effected by TBI and are tied to every element of social and familial support and cohesion for the recovering individual.

It is critical that accurate assessment of an individual's strengths and limitations followed by appropriate interventions to improve behavior take place from the beginning of treatment. A person with TBI often suffers memory and personality impairments. These impairments threaten social relationships and can lead to social isolation, frustration and substance abuse. Given an opportunity to become involved and learn in a challenging environment, these socially challenged individuals often achieve a new sense of identity and self-esteem.¹³ As the high incidence of vocational and academic failures can be attributed partially to substance abuse, in order to more effectively overcome obstacles to educational and vocational outcomes, professionals can become more knowledgeable about and can educate their clients about substance abuse risk factors, assessments, and interventions while stressing the need for continuing education, family involvement, and increased monitoring with increased independence.¹⁴

Private insurance rarely pays for anything other than acute care, and the co-payments on that care are beyond the financial reach of most individuals. The health-care crisis of the 1990's has forced a move toward managed care in medical treatment. This poses a new danger to rehabilitation, especially in treatment of brain injury. Insurance companies are increasingly intervening in treatment planning, while control of patient care is moving out of the hands of clinicians and facility managers into the hands of the payers for services.¹⁵

An important first step in financial planning for a person with TBI is determining eligibility for government benefits. The next step involves looking beyond government benefits, which generally pay only basic room and board expenses, and calculating the remaining financial needs of the person with TBI. A financial strategy can be devised once these basic costs are determined. Experts in financial, investment and estate planning as well as insurance specialists should be consulted for help in determining long-term costs.¹⁶

Whether acquiring knowledge of legislation impacting people with TBI or selecting a competent plaintiff's attorney when a personal injury suit is involved, a person with TBI and their caregivers may require expert legal advice. If the event that caused the TBI may become the subject of civil litigation, it is important to select the right lawyer as soon as possible. Money obtained through litigation is used for compensation for lost income, pain and suffering, and to pay for treatment and rehabilitation programs.

The "other" category in the life-care list is designed to include planning for any individual aspect that may not fit conveniently anywhere else in the life-care-planning list. These may include religious, leisure or other activities that are of particular interest to the individual. Special diets, equipment, and clothing, treatments that work, and personal preferences should be considered here.

The only cure for TBI is prevention. Use of seat belts and air bags in cars, use of helmets by riders on motorcycles and bicycles, along with efforts to eliminate drunken and unsafe driving can reduce the incidence of TBI. Gun control, awareness and reporting of child abuse, stricter regulations governing contact sports, and the prevention of secondary injury through prompt identification and diagnosis of TBI are also ways to reduce the incidence of TBI. Considering the extent of the intellectual and personal loss caused by TBI as well as the enormous financial burden placed upon families and society as a whole, the little effort directed at prevention is woefully inadequate.¹⁷

In spite of the best efforts at prevention some individuals will become injured; and they will need effective rehabilitation services. Only a comprehensive program of professional services can mitigate the mental, physical, emotional, spiritual, and financial costs paid for by survivors of TBI, their families, and the larger community. With an understanding of the unique processes of vocational evaluation, team oriented planning and therapy, and special support services specifically directed at re-training people with TBI to re-enter the community and the workforce, professionals, and the public alike, can assist survivors of TBI to achieve meaningful and rewarding lives.

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The Neuropsychology Department at Hawaii State Hospital

Daryl E.M. Fujii PhD*

The Neuropsychology Department at the Hawaii State Hospital has been an oasis for Hawaii's brain injured population. It is one of the oldest neuropsychology services in the United States and one of only a handful of state funded programs. The department has been in existence since 1973 and has just celebrated its 25th anniversary. This article will briefly describe the past, present, and future of the Neuropsychology Department.

The department originated when psychologists Jim Craine and Howard Gudeman used monies from a federal grant for improving hospital services to evaluate brain damage in schizophrenic inpatients. Although the project was successful, the two psychologists were dismayed that there was no treatment for the patients diagnosed with brain damage. Thus with the assistance of a creative staff, they developed their own cognitive rehabilitation program. Today the Neuropsychology Department provides services to the entire state including neighbor islands. The department consists of two separate programs providing services in neuropsychological assessment and cognitive rehabilitation.

The assessment program is responsible for providing comprehensive neuropsychological evaluations and training graduate students in assessment techniques and case conceptualization. Currently, due to limited resources, the assessment program services primarily HSH inpatients, community health center patients, courts and correction referrals, and clients admitted into the neurotraining program.

Assessments have historically been based on the traditional Halstead-Reitan Neuropsychological Battery (HRNB).¹ The HRNB is a fixed battery of tests that comprehensively examines a variety of brain functions such as attention, language, perceptual organization, memory, and problem solving. The battery has been found to be useful in identifying brain dysfunction and assisting in localizing brain lesions.

Dr. Craine has trained many of the local neuropsychologists in practice today through weekly case conceptualization seminars. His seminars have been an ongoing tradition for over 20 years. A former student of note is Charles Golden, a prominent neuropsychologist who later went on to develop the Luria-Nebraska Neuropsychological Battery.²

Recently, there has been a shift in orientation with a strong influence of the Boston Process Approach.³ In comparison to the HRNB, the Process Approach is hypothesis driven and emphasizes the process of performances on testing versus quantitative test scores. In testing hypotheses a flexible battery is utilized to address different questions the clinician may have for a particular case. Despite changes in the evaluation process, the goal of providing Hawaii with quality assessments still remains.

The jewel of the Neuropsychology Department is the neurotraining program. Neurotraining is a comprehensive cognitive rehabilitation program that was developed in Hawaii by Drs. Craine and Gudeman, and neurotraining staff. The principles of neurotraining are based on Alexander Luria's⁴ theory that the brain is plastic and can recover from injury by forming new connections. Through use of repetitive problem solving activities administered in one on one sessions several times a week, therapists have been successful in improving cognitive functions of many brain injured individuals in Hawaii. The principles and techniques of neurotraining are summarized in a book that was authored by the department.⁵

Similar to the assessment laboratory, the neurotraining program is also undergoing changes. Historically, clients of the program have been serviced in one to one sessions with a neurotraining therapist or technician. However, due to limited resources and the great demand in the community, alternative methods of service delivery are now being pursued. One new method of treatment is through groups. Treatment groups are currently being held for socialization of community clients and for enhancing attentional skills of inpatient schizophrenics. In addition to groups, staff are also focusing on training other professionals in neurotraining to expand the resources in the community. Such programs are occurring on the Big Island and in the Department of Education on Oahu.

Currently, it is an exciting time for the Neuropsychology Department. Collaborations are being established with the University of Hawaii Department of Psychology to do research and with other agencies such as the Pacific Brain Injury Association to provide better services to the community. The department has also participated in organizing local conferences on traumatic brain injury to increase community awareness and education. Programs for previ-

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Hawaii Neuropsychology Program Gets Results: The Nuts and Bolts of Neurotraining

James Craine PhD*

Anecdotal reports from Hawaii's Neuropsychology Services reveal severe brain impaired clients have significant improvement in functions suggesting considerable recovery is possible, and contradicting the "irreversibility" of brain injury. Hawaii's Neurotraining program uses assessment techniques to map brain functions targeting deficits, evaluation to determine specific strategies to regain impaired functions, and stimulation exercises to retrain the brain with the basic cognitive skills necessary to learn.

Introduction

Here in Hawaii, the State Department of Health's Neuropsychology Service devised a program designed for the purpose of treatment and rehabilitation of patients with brain lesions. This program required a basic set of assumptions and directions to be used in neurotraining, the name given to the program.

This is a structured program aimed at the remediation of cognitive deficits resulting from brain insults. In order to implement the program, it was necessary to detail a series of "working principles" derived primarily from clinical practice, observation, and considerable trial-and-error effort.

Due to the widespread belief in the permanence and irreversible nature of brain damage, a great deal of pessimism has existed generally concerning the potential of environmentally based strategies for inducing recovery following injury to the central nervous system. As a result, much of the rehabilitation efforts with these patients have been limited primarily to efforts to help the individual compensate for the effects of the injury and to adjust to the limitations imposed by his deficits. Neurotraining is especially interested in detailing the deficits as revealed by tests, but not to help the

individual compensate for them or adjust to them but rather so that the assessment can zero in on the deficits as a target for the retraining program.

Neuropsychology Assessment: Diagnosis

Even if the Neurotrainer knows that specific sensory or motor or other neuropsychological deficits are due to a specific lesion in the brain, the primary question asked by the client is what can be done about his persistent disabilities.

Specification of Deficits

It is time to reverse the current conclusions involving the irreversible debilitating consequences of brain damage. For Neurotraining it is necessary to target the deficits, as this is the area where the individual is hurting the most and is especially in need of help. This is the area where he or she is at the most disadvantage when compared with others who are not impaired.

Specification of Strengths

It is also important to take special note of each of the strengths that are revealed from the extensive testing process. The Neurotrainer can use the strengths to praise and encourage the client and also may be able to bridge the strengths to the deficits if this proves to be feasible.

Developing a Neurotraining Program: What Is Neurotraining?

Neurotraining is the systematic application of psychological and neurological principles for the purpose of enabling individuals to overcome the deficits that result from central nervous system dysfunction.

Aim at Deficits

First, Neurotraining is training aimed at specific deficits. This means the intent is to work directly with the most impaired areas for each patient. In other words, training in the areas where the person hurts the most and was at the greatest handicap. With each deficit spelled out in clear behavioral terms, it is easier to design effective training programs for the person being trained.

It is worth pointing out that to make a comprehensive list of the various deficits is not the same as attempting to specify the location in the brain of the lesions for a patient who is diagnosed with brain dysfunction. For training purposes, the primary concern is with the gap in individual performance, the behavioral deficits, rather than

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copyrighted test for localizing brain injuries.

with the location of the specific lesions of the brain. This satisfies the need to be able to say, for example, that an individual has great difficulty with new learning in the auditory-verbal area or that visual-spatial memory is notably weak. These are the behavioral deficits and as such are the focus of the neurotraining program.

Although there is a definite relationship between the physical status of the brain and the performance of the individual, neurotraining intends to deal with the actual performance of the individual and to make use of the brain model only as it has further meaning in terms of the current performance of the individual patient. If careful attention is paid in the determination of the specific deficits for each patient and if the training activities are carefully structured on the basis of these deficits, then it is clearly possible to promote considerable recovery within the brain damaged population.

Making Use of Activities as Brain Exercises

The idea of using exercises for the brain is to make use of the ability of the brain to improve with stimulation. The name of this "game" is stimulation, and Stimulation, and **Stimulation**. The human brain has been called the adaptive organ because it is through the brain that everyone is able to adapt to changes in the environment. The adaptation comes about by means of the learning process which is controlled by the brain. In order to bring about these changes, there is a need for heightened stimulation. The neurotraining program becomes the means to provide the precise kinds of stimulation needed.

It is common knowledge that individuals tend to lose functions and abilities through lack of use or because of restriction of stimulation. If there is injury to the brain, from whatever cause, ability to adapt and to learn can be slowed or completely halted. However, it is possible to gain or regain functions and abilities with the aid of properly administered stimulation. Because it becomes a learning process, it is possible to structure training activities in such a way as to promote recovery of function.

The function of neurotraining is to stimulate in the direction toward which the learning or the relearning needs to occur. Because the brain is the adaptive organ the individual will be capable of making changes in behavior in response to changes in the environment. It is essential, however, that the stimulation be carefully planned and as specific and precise as possible.

It is apparent that the environment acts to stimulate individuals constantly and continually. This is not generally a program of planned stimulation, however, and may indeed be quite haphazard. Neurotraining is able to intervene in such a manner as to control the environmental presentations to provide a special kind of training called "programmed stimulation". This is where neurotraining enters into the picture. The central nervous system, even with a brain in a pathological condition, is not a closed system but is continuously reacting to external influences and continues to be affected by external events. If the individual is able to perceive stimulation, it would follow that he is also susceptible to changes in his behavior as a consequence of the changes in his environment. It is on this basis that it is possible to structure neurotraining activities in order to promote recovery of function.

Need for Numbers

In order to provide the intense amount of stimulation that is

needed to achieve improvement in brain functions, an extensive resource of exercises of all types is available. The one essential that all of these exercises have in common is that they are able to make use of numbers to indicate progress in each exercise. From the very beginning, a requirement was made to quantify all of the activities in order to keep track of the progress and thus be able to draw graphs of the results. It is in this manner that Neurotrainers are able to know when each of the pre-chosen criteria have been reached.

Quantification can be a score in terms of number of seconds to complete a task or the number of blocks piled on a stack or the number of items remembered or whatever else the criteria might happen to be. The essential point is that numbers are applied to the tasks so that a score can be kept of the activities. The clients sometimes complain that it does them no good to reach a criteria point because as soon as they succeed, a new criteria is set and thus the task is made more difficult for them. They are correct. The increase in the level of expectations is the method used to encourage clients to improve and make progress.

Frequently, clients will not realize the extent of the progress they have made over time. However, when the Neurotrainer can show them the graphs and point to the score achieved six months earlier, then they can appreciate their progress. The use of numbers for this purpose is invaluable.

First Things First

"We must learn to crawl before we walk and must learn to walk before we can run." This simply states that there is a developmental order involved in new learning. Relearning follows the same order of progression. The idea is simply that the completion of development of one stage is essential and is a prerequisite to the development of the next stage. It would be foolish to disregard this natural order of human learning and development in the neurotraining program.

In the training situation, it is necessary to recognize the importance of the hierarchical aspect of learning, both in describing and specifying a client's deficit and in structuring the goals of the training activities. As a matter of course, developmentally earlier tasks are trained first and these in turn are used to structure later more complex kinds of activities. In this way the stages of neurotraining attempt to recapitulate the stages of normal development that are followed in the growth of an individual or in the normal learning of a skilled behavior.

Observation of children at play reveals that they are continually doing something in their games that will prepare them for the next kind of activity that they are going to be doing next week or next month or next year. In the final analysis, all of these activities prepare them for life as an adult and it appears to be a natural order of progression. So once again Neurotrainers must keep this in mind when working with clients who have brain damage so as to provide them with the proper order of activities in order to lay a solid foundation.

It is even possible that a mature patient who has had abilities severely impaired may well have to start some of his training at a level that a four-year-old child would find appropriate. The client may make objections as to the level at which he may have to start a particular exercise as he thinks it is ridiculous for a grown person to be practicing a task that a young child can do. However, it may be essential that practice be completed at this level before it is possible

to progress to more difficult levels. One consolation is that the adult will probably be able to progress much faster than the child at the same task.

The importance of proper levels of training cannot be minimized. If the mastery of a prior level is not complete before the next level is presented to the client, he may well have some difficulty with this next level and with all succeeding levels simply because there is something missing in his repertoire. It is also possible that neglect of the proper developmental sequence of learning may be why there have been so many failures in the past in attempting to retrain brain damaged patients. If there is a failure to initially work with a patient at a level well within his grasp and then a failure to carry him progressively through more complex stages of development in the proper sequence, it may become difficult or impossible for the brain damaged patient to reestablish a functional system.

Learning to Learn

In a sense, neurotraining is seen as a process through which a patient with brain damage learns how to learn. It is almost as if he has forgotten how to learn and does not know how to start. Thus the training process is one designed to teach him how to learn.

The emphasis and procedures of neurotraining focus upon the learning process itself rather than upon any specific content area. There are times when brain damaged patients appear to lack the capacity to benefit from specific training programs such as high school, college or trade school simply because they are unable to absorb the training as it is presented to them.

Neurotraining carefully starts each client at a level where he can succeed in whatever the task might be and then only gradually presents an increase in the difficulty of the task so that he begins to realize, over time, that he is capable of learning. This kind of training is laying the groundwork so that the individual will be able to proceed, if he desires, with more specific training, perhaps at school or in a vocation. Neurotraining prepares the client to learn from these educational or vocational efforts by providing him with the basic cognitive skills necessary to learn.

The Nuts and Bolts of Neurotraining Program **Provide Constant Personal Attention**

Neurotraining works best on a one-to-one level. The complexities involved in the retraining of brain functions require that a program is developed to meet the specific needs of the client. Maximum benefit from such a highly individualized program can best be achieved through the personal attention given to clients in a one-to-one setting.

The personal attention given creates an environment where the client is free to express his/her feelings, both negative and positive, to the trainer. This interaction can provide valuable insight to the client and will produce direct feedback for the trainer on the effectiveness of the training. As a result, the Neurotrainer can respond immediately to an individual's needs, both as a client and as a person.

Neurotraining is thus seen as a dynamic, ongoing, changing, and developing process rather than a monotonous, dull, and cut-and-dried series of practice sessions.

Although the requirements of one-to-one training may seem to be an extravagant use of manpower, the uniqueness of this process

makes it a necessity. Fortunately, some additional special advantages accrue because clients will tend to respond more positively to such an environment in which they do not have to compete with anyone else for attention or for results. In addition, the personal attention helps to generate enthusiasm and helps in developing and maintaining motivation.

Provide constant and Systematic Feedback

Neurotraining requires the active involvement of both client and trainer. It is essential that the client be continuously informed of the progress being made, the purpose of the exercises, and the achievement of sub-goals along the way. An effective way to involve clients in the process is to tell them the scores they make in each of their exercises and to frequently show them their graphs so that they can understand and identify with them. Most clients become quite interested in this process and frequently want to record their current scores on the graphs. This active involvement should be welcomed and encouraged in order to stimulate motivation. It is apparent that progress is usually quite slow and laborious in this kind of training and the Neurotrainer continuously needs to fight against client discouragement and depression. Appropriate regular feedback about the client's method of performance, and the unique aspects of each activity needs to be communicated, because this is one of the primary keys to successful learning. Clients often fail to recognize the positive improvements being made, but with proper use of feedback can be kept informed regularly.

Provide maximal stimulation

Whether the objective is to improve motor functions, memory, sensory perception, communication, or other high level central nervous system functioning, the aim must be achieved through means of stimulation. The best gain from time spent results from a maximum amount of stimulation that is properly presented and coordinated.

The brain responds to any and all types of stimulation; thus any stimulation in general will be of benefit to the brain as a whole but for Neurotraining purposes the stimulation should be precise. This is especially important in order to focus upon some highly specific brain functions. In neurotraining, the stimulation (1) should be prolonged and intensive through repetitive practice and (2) should consist of multi-modal stimulation and integration whenever possible.

It is not sufficient in this kind of training merely to make the stimulation available and expect to see achievement of goals. The client needs repeated stimulation on a regular basis in order to reconstruct and/or bolster the impaired function. The behavior, and thereby the function, must be continually produced until it is so readily available that it overcomes compensatory behavior and thus is used in everyday life.

Essentially, unselected stimulations occur naturally as life in general offers constant stimulation. This natural stimulation often plays an important role in so-called "spontaneous recovery" of brain functions after impairment. This recovery is often far from complete, however, and in order to be effective the stimulation should be repetitive for as long a period of time as necessary.

Stimulation should be as specific as needed for a given function and should be as intense as the client can accept without undue

discomfort. This kind of stimulation is possible in neurotraining through a precise mapping of deficits, a careful selection of exercises, and hours of expertly monitored repetitive practice.

Enter Training at the Proper Level

Unless attempts are made to commence training at the proper level for each client, in accordance with current abilities, it is possible to lose the benefits gained from a well-conceived training plan. If training is begun at a level that is too easy, the client will not benefit from the experience and little or no progress will be made. Conversely, if it is started at a level that is too difficult, failure will be evident along with discouragement and possible loss of motivation. Again, no learning will result from the experience except that the client may decide that this is an activity to be avoided or that he cannot make progress in this area. This is why it is necessary to put special stress upon orienting training efforts so that the client can experience success but has to put out an effort to do so and is thus forced to work and "reach" in order to succeed.

There is a special technique called "a baseline" that can be used to commence training at the proper level. It is necessary to establish a baseline for each client and for each exercise used. This is achieved by first making a brief survey of the client's range of ability in each activity by sampling ability, first at a very easy level and then by progressing in a series of steps to a point of excessive difficulty.

When this is completed, which takes just a short amount of time, a clear picture of the client's range of ability for this particular exercise is mapped. Once there is an established baseline for an exercise, it is then easy to select a level at which to enter training for that activity which will insure success the major part of the time but will still have a high enough level of difficulty to cause some errors. Training can be commenced at this point with confidence because the client will have to work to achieve the established criterion for success.

Increase Difficulty in Small Increments

Once training has begun, it is then necessary to insure that each selected task increases in difficulty in small steps and at regular intervals. This requirement seems to be necessary in order to force each individual to "Stretch" and to continue to improve while at the same time being careful not to impose too large a step, as this might cause failure.

Each training technique or activity must be capable of being calibrated in increasing degrees of difficulty. In addition, each step of increased difficulty will carry with it a criterion of success which will signal when to move to the next higher step. It is preferable that each step be relatively small so that the progression in difficulty from one to the next will not be too large. This particular point may often require close scrutiny because there will be times when the step upward seems to be small and orderly but a client will respond to it as if it were a very large and insurmountable barrier.

When a reaction of failure to be able to take the next step occurs, it may be necessary to backtrack and either make the step smaller or, if that is not practical, to break the activity down into two or three separate exercises. When proficiency has been gained in these separate parts, it should be possible to put the original activity back together again and find that the previous barrier is no longer seen to

be insurmountable. When properly done, learning occurs and orderly improvement and progress will result.

Insure Successful Endeavors

It is of utmost importance that clients have success in their training experiences. Because training is in areas of specific deficits, this requirement may at times pose some rather challenging problems but it should always be observed. Although there is the popular saying, "We learn by our mistakes," this is not the kind of learning used in neurotraining; instead, emphasis should be on the positive rather than the negative.

Failure, in certain instances, may bring about the development of avoidance reactions. Because the training is in deficit areas, clients may already be inclined to try to avoid the activity. Life experiences frequently provide these failures and clients may often build elaborate ways of avoiding further failure in the area.

It is doubly important that successful experiences are provided when training in these deficit areas. As clients are lead through their exercises and they find to their surprise that they can succeed in these kinds of activities, it is very rewarding to them. Unless the efforts in the neurotraining exercises result in some measure of success, there will be little or no learning taking place and the learning that is achieved will certainly not be in the desired direction.

Insist Upon Overlearning

It can be quite discouraging to discover that a seemingly well-learned skill can be quickly forgotten after a short period of disuse. When this occurs, it is quite probable that the learning process was terminated prematurely. The best way to guard against this happening is to insist that the skill be overlearned to the point that it becomes almost automatic. When this point is reached, disuse will not readily erase the skill as it will have become a permanent part of the individual's repertoire. It is for this reason that overlearning in neurotraining is an essential key to the process.

In the neurotraining program clients are working with deficits that will have to be restored and relearned. In effect, they are using substitute or weaker tools to achieve these goals. The learning is tenuous and needs to be very well consolidated, firmly established, and overlearned in order to become a permanent skill.

The periodic use of exercises in order to refresh the previous learning is also recommended. This will help to guard against the weakening or possible loss which may occur even in overlearned skills if these are not reinforced by regular use. In this way the newly restored skills can be utilized and maintained at peak efficiency.

Conclusion

There is no question but that extensive gains can be made by those patients suffering from impairment of cognitive functioning, providing environmentally based strategies designed to encourage recovery are properly administered. Significant recovery from cortical dysfunction requires considerable time, involving months or even years and many helping hands. However, clients no longer have to accept arguments specifying the "irreversibility" of the cortical lesions. In addition, the experience with neurotraining suggests that considerably more recovery is attainable than has ever before been thought possible.

Phantom Loss of Function in Traumatic Brain Injury

Walter S. O. Fo, Ph.D.* and Rosalie K. Tatsuguchi, Ph.D.**

Despite appearing normal, survivors of TBI typically experience residual effects that significantly impact their daily functioning. Informed that they have a mild, transient brain injury which is expected to resolve rapidly, they encounter marked psychological difficulties when their cognitive dysfunction persists. Left undiagnosed and untreated, patients with TBI are at risk of developing serious psychiatric disorders. Early identification and referral to specialists in neuropsychology can head off this adverse clinical course through appropriate assessment and intervention.

Introduction

Traumatic Brain Injury (TBI) is one of the most common of medical conditions afflicting countless millions of people worldwide. Despite its prevalence, it is a disorder that is not widely understood—particularly when clinically manifested in mildly-to-moderately severe presentations of the syndrome. Survivors of TBI often appear uninjured with no obvious physical impairment, yet are unable to resume their normal daily activities due to the residual effects of their brain injury. For this reason, TBI has come to be known as the “silent epidemic”—surreptitiously striking and snatching away productive individuals from the mainstream of society and from personally fulfilling lives.¹

An Under-Recognized Condition

Many instances of TBI initially may go undetected by health care professionals, despite the presence of medically documented cerebral concussion or other evidence of physical assault to the brain. Even when recognized and diagnosed in a timely manner, the severity of the disorder and its corresponding functional impact upon the individual are frequently underestimated.

When this occurs, the clinical course for patients with TBI becomes unnecessarily difficult and complicated. These patients may be sent home with the pronouncement that they have sustained

a mild brain injury which is expected to have minimal effects on day-to-day functioning and to resolve quickly. Further assessment usually is deemed unwarranted, and treatment prescriptions if any are generally palliative in nature. For patients diagnosed with “mild TBI,” the reality of their life upon returning home is often a far cry from the innocuous-sounding description of their injury and its accompanying favorable prognosis. To their confusion and dismay, survivors of TBI typically encounter significant functional difficulties in performing what had been the simplest of tasks previously.

Illustrative Case

Ms. S, a 25-year-old single sales clerk, was discharged from the hospital emergency room following a motor vehicle accident in which she sustained a mild concussion. Except for complaints of headache, the patient appeared to exhibit minimal physical sequelae arising from the trauma to her brain. She was discharged home with instructions to follow-up with her primary care provider. Upon seeing her personal physician a week later, Ms. S reported that while her headache had resolved for the most part, she had been feeling listless and fatigued. She complained that virtually everything she did now seemed to be “such a chore.” Even the easiest of household work tasks represented a formidable undertaking for her that taxed her mind and sapped her strength. Additionally, Ms. S related how “absent-minded” she had become. For example, she would neglect to use laundry detergent when she did the wash. Repeatedly, she would misplace her keys, or forget what she had gone into a room to retrieve. Ms. S’s doctor duly noted her reported difficulties and assured her that while these symptoms were not unexpected, given the head injury that she had sustained, they were likely to be temporary. He encouraged her to be patient and to take things slow and easy for awhile. In the meantime, he would monitor how she was coming along, so she was to return in 2 weeks.

Ms. S’s basic clinical presentation did not change substantially when she returned for follow-up, nor did her symptoms remit over the ensuing months. Her husband confirmed that his wife continued to have the same kinds of difficulties in her day-to-day activities as she had reported earlier. Adding to her mounting frustration was the patient’s acute awareness that obviously something was terribly wrong with her. She still was not able to perform like she used to. While she had resumed her daily work activities, she found that every task required a substantial effort to accomplish, took longer than usual, and was prone to error.

The patient’s arduous efforts to reclaim her prior level of functioning began to exact an emotional and physical toll on her, and she felt demoralized by her life circumstances. She found her condition all

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the more difficult to accept because this "was not supposed to happen," as after all, had she not just sustained a mild concussive syndrome? She struggled to reconcile her daily observations of her own behavior with being told that she had a mild brain injury with transient difficulties that were expected to resolve completely.

By a year post-concussion, Ms. S was a thoroughly exasperated and bewildered young woman. Her symptoms had continued essentially unabated. If anything, they were worse now, as she tended to focus excessively on the difficulties which she was experiencing. She became preoccupied with her deficiencies, which she perceived as rendering her "a shell of the person I used to be." She found herself questioning her own judgment in a wide range of matters, and encountered notable difficulty making decisions. It was perplexing to observe these changes in herself, which served to erode further her sense of self and undermine her confidence. She ruminated obsessively about how drastically her life had changed—and for no real reason or at least one that her doctors could point to!

Compounding the problem, Ms. S began hearing from her family, who were growing increasingly weary and impatient with her, that she was making it difficult for them! They pointed out how irritable she was much of the time, snapping at them for no good reason. She was incessantly demanding and appeared incapable of being appeased. They complained how she was often moody, broke into tears easily, and sometimes flew into rages with minimal provocation on their part.

To Ms. S's consternation, her family also admonished her for "not handling her problems." With her doctors reporting no medical

disorder to account for her symptoms and with no obvious physical impairment evident, the patient's family assumed that the problem must be with the patient. They chided her to "change her attitude, stop being that way, and get over it already!"

Not surprisingly, by this time Ms. S was nearly distraught with frustration and anger; clearly, she was exhibiting a significant emotional overlay to her medical condition. In fact, she was at risk of developing a major affective disorder. As far as the patient was concerned, she had already long concluded that she was "going crazy."

Functional Impairment from TBI—Real or Imagined?

Ms. S's case demonstrates what could be called the "phantom loss of function" which often characterizes traumatic brain injury. Like a "phantom," TBI appears not to be there but is actually present. As in the aforementioned case, TBI often presents with accompanying functional impairment which does not seem commensurate with the perceived nature and extent of the brain injury sustained.

This phenomenon occurs because the effects of mild to moderate TBI are often difficult to see on casual observation. Survivors of TBI frequently "look good" on mental status exams, inasmuch as the kinds of difficulties experienced, such as memory problems, are not readily discernible in even carefully performed MSE's. Indeed, standard psychological testing as well may not detect the subtle but significant cognitive deficits associated with TBI. For example, the widely used Wechsler Scales of Intelligence usually do not reliably

detect the more subtle aspects of organic brain dysfunction. Moreover, it is not uncommon for patients with serious brain dysfunction to score in the average range on subtests of the Wechsler. Such test findings only serve to obscure, rather than elucidate, the TBI survivor's mental status.

When patients with apparently mild/moderate TBI submit disability claims (e.g., Worker Compensation or Social Security Disability), they may fail to even establish the presence of their disorder, much less demonstrate a severity sufficient to warrant disability status. Many claimants with significant cognitive impairment arising from TBI are routinely denied disability benefits because of a lack of objective findings—despite extensive medical records recounting their complaints over time and an abundance of third-person reports from family and friends corroborating the TBI patient's reported loss of function.

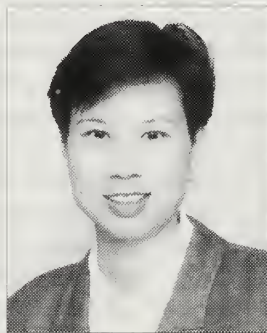
For example, in the Social Security Disability program, it is not uncommon for a claimant's medical records to indicate a less than severe traumatic brain injury, yet the claimant and significant others report a degree of functional limitation which casts serious doubt as to the claimant's ability to perform substantial gainful activity on a sustained basis. This occurs because treatment sources or consultative exams in the medical record report MSE and psycho-

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logical tests results which do not substantiate the claimant's allegations with objective findings. In the absence of sufficient confirming evidence from medical sources, a TBI survivor's claim for disability generally is not likely to be allowed. So once again, the societal message to TBI survivors is "You do not have a significant medical condition" in spite of their everyday experience to the contrary.

If the above-described scenario is to be averted, it is essential that TBI be recognized by health care providers at the onset or as early as possible. Just because there are no hard signs of TBI in a particular setting (e.g., in the emergency room or doctor's office), it does not necessarily mean that the condition is not present. Yet it is customary for health care practitioners to assume that if there are no objective indications of a medical disorder, then it must not be present.

Assessment Issues

The following measures may be fruitfully undertaken to ensure the proper identification and assessment of the patient with TBI: (1) Early detection of even seemingly mild cognitive deficits can set the stage for judicious monitoring of the residual functional effects of the TBI over its clinical course. (2) Then when physical sequelae of the brain injury do not remit as expected, further assessment can be undertaken without delay. At that point, preliminary neuropsychological testing can be done to pinpoint more precisely the nature and extent of the cognitive deficits present. Baseline measurements of the individual's current cognitive functioning can be established, to compare with later findings in order to measure changes over time. (3) More extensive neuropsychological assessment may be performed as warranted, in order to produce a systematic brain-mapping of the TBI patient's localized areas of cognitive dysfunction. At the same time, the TBI survivor's cognitive strengths may also be assessed and incorporated into the design of a suitable cognitive rehabilitation plan.

At this juncture in the neuropsychological work-up, it is not unusual for a pattern of cognitive deficits to emerge into focus, which considered singly may not appear remarkable, but collectively yield a compelling explanation as to why the patient with ostensibly mild TBI in fact encounters such pronounced difficulty in daily functioning. By elucidating what is going on in the TBI patient's brain, the results of neuropsychological assessment can be highly instructive to the attending physician, who has now been provided with a framework for making sense of the patient's functional complaints. However, the ultimate value of neuropsychological assessment as a diagnostic as well as treatment tool is perhaps most evident in its positive impact on the TBI survivor, who invariably is in a position to benefit immediately from its findings.

Treatment Considerations

Neuropsychological assessment results typically introduce a measure of light into what had been experienced by the TBI survivor as a veritable darkness. For perhaps the first time since their injury, survivors of TBI are provided with information that accounts for the functional difficulties with which they have lived in past months. The TBI patients' bewildering complex of functional limitations—which heretofore had been experienced as a phantom—now are understood for exactly what they are: logical effects of known causes associated with the specific pattern of cognitive deficits originating from brain injury. These are no longer phantom losses of

function, but instead known and expected sequelae of trauma to the brain.

Finally, TBI survivors' everyday life experience in the aftermath of their brain injury is validated. In fact, they have been found to have a legitimate disorder—one that has a name, with residual deficits that can be directly attributed to it. As survivors of TBI come to understand how the brain functions, they acquire a working understanding and appreciation of the specific bases for their cognitive difficulties. Survivors of TBI retrospectively report that attaining this understanding typically represents a turning point for them, like "having a burden lifted off their shoulders." While they still face the same daily functional limitations as before, they reportedly feel better equipped to deal with them. For survivors of TBI, knowledge is power—empowering them to understand and accept their impairment, and ultimately enabling them to cope more effectively.

In addition, the neuropsychological test results afford an opportunity for the family of the TBI survivor to be apprised of the patient's medical condition, including an explanation of the underlying basis for the patient's observed functional difficulties. Proactively providing such information sets the stage for the physician to involve the patient's family more integrally in the treatment plan. Cultivated as allies, caregivers can make a distinct difference in eliciting and supporting the patient's active participation in treatment. Enlisting the family's cooperation in this intentional manner can contribute substantially to improved treatment compliance and outcome—all the while making life a whole lot easier for the physician. At the same time, the attending physician's consultative input to the TBI patient's family members can keep them involved in constructive activities in support of the patient and prevent caregiver burnout.

At this point, the TBI patient's improved prognosis is due not only to a more complete understanding and acceptance of his/her medical condition by both patient and caregivers. It is also attributable to another concrete benefit of neuropsychological assessment findings—pointing up specific strategies for remediating the cognitive deficits identified. Neuropsychological testing first pinpoints the specific profile of cognitive deficits present, then suggests possible points of intervention for overcoming the individual's identified functional losses.

Misconceptions about Brain Injury

Contrary to popular belief, brain damage is not a condition that either gets better or never does. If one believed this duality of outcome for cases of organic brain dysfunction, one would be reluctant to diagnose those who fell in the cannot-do-anything-for-them-anyway category. In neuropsychological intervention with organic brain dysfunction, an all-or-nothing mentality is decidedly not apropos. Hawaii neuropsychologist James Craine, Ph.D. has made a life's work of developing strategies and techniques for measuring and retraining damaged functions of the brain. His research findings show that neurotraining based on localizing specific cognitive functions can be effective with even severe traumatic brain injuries.²

Another common misconception prevalent in the TBI field is that the etiology of a particular organic brain condition determines the nature of the treatment available for it. The reality is that organic dysfunction can be viably treated with intervention techniques linked to the nature and type of the specific cognitive deficit,

irrespective of etiology. For example, the basic cognitive retraining methodologies developed by Dr. Craine, as described earlier, are likely to work with less severe non-traumatic brain injuries and learning disabilities—in addition to severe traumatic brain injuries.³ These kinds of organic brain dysfunction could not be more different from one another in etiology, yet they may be treated with similar methods of cognitive retraining, based on the localization of brain functions.

Availability of New Treatments for TBI

Thus while still an evolving science and art, neuropsychological training already has much to offer TBI survivors with cognitive dysfunction ranging in severity from mild to marked. However, the availability of effective treatment methodologies for retraining a broad range of organically based cognitive deficits may not be widely known, due to their being relatively new. It may be that if health care professionals were generally more aware of the interventions available for TBI, they might be more predisposed to diagnosing brain damage and informing the patient of it, as well as passing along treatment recommendations.

Timely and well-designed neuropsychological intervention enables TBI survivors to recover certain cognitive functions, by learning to learn all over again. They also are equipped with cognitive retraining strategies for strengthening and re acquiring previously diminished function, as well as for putting into place alternative cognitive strategies to compensate for lost function. The reader is referred to the article on neurotraining by James Craine, Ph.D. elsewhere in this journal edition, which reviews his pioneering research in neuropsychological intervention techniques based on specific, localized cognitive functions derived from careful mapping of the brain.⁴

The Role of the Physician in TBI Management

The process of diagnosing and treating cognitive dysfunction arising from TBI is greatly facilitated by the attending physician who recognizes when to make a timely and appropriate referral for neuropsychological assessment and treatment. The role of the physician in recognizing significant cognitive sequelae of TBI is particularly critical in TBI of mild to moderate severity, in order to avoid some of the pitfalls described earlier. When uncertain, the attending physician may well wish to consider consultation from a neuropsychologist trained and experienced in the assessment and treatment of organically based cognitive dysfunction.

Whether the attending physician manages the patient with TBI alone, or in concert with specialists, it bears noting the obvious: his/her role is a highly influential one in shaping the attitude and expectations of the patient with TBI. This power is naturally double-edged: it can be wielded sensitively and judiciously to impact the TBI patient positively (e.g., to invite the patient to join with the provider in pursuit of his/her own healing or recovery), or otherwise. Obtaining consultation from neuropsychologists, who routinely have expertise in matters of interpersonal influence, can contribute to the development of the kind of working relationship between doctor and patient which optimizes patient outcome. Consultation may also prove fruitful in certain TBI cases in which psychosocial factors may be of such critical importance as to override medical considerations under the purview of the physician.

As an ancillary treatment provider called in to participate in the care of a TBI survivor, the neuropsychologist can contribute significantly to meeting the overall health care needs of the patient. Beyond their expertise in evaluating the presence/severity of cognitive deficits and prescribing treatment for alleviating their effects, the neuropsychology specialist can also play a crucial role in attending to the emotional and psychological needs of TBI survivors in adjusting to their medical condition. Since human organisms are notorious for seeking to make sense of what has happened to them (i.e., by asking such questions as “Why me?” and “What effect will this have on my life?”), any professional guidance provided at such times can have more than salutary impact on the patient with TBI. The specialist in neuropsychology is particularly well-suited to assist the TBI survivor with issues such as these.

Emotional Sequelae of TBI

Patients with TBI who are not afforded the opportunity to talk about their medical condition and its expected impact on their life, or to process their feelings about what has happened to them, are likely to be distracted from full participation in their own health care. As a result, medical compliance issues may needlessly arise and adversely impact the TBI patient's clinical course. The “difficult” or “uncooperative” patient may merely be one who does not understand what is happening to them and is “acting out” their anxieties or other powerful emotions. For the physician who may not discern that the patient is manifesting signs of TBI, it is likely that the patient with mild TBI will be perceived as inexplicably difficult and demanding.

Most prominent among the disruptive emotions which may interfere significantly with the medical treatment of the TBI patient is grief. The patient with TBI is highly likely to be encountering some form of grief over the real and/or perceived sense of loss experienced as a consequence of the functional limitations stemming from the brain injury. The grieving process may be overt, or it may go “underground” where it may not be at all apparent that the patient is in fact grieving. In addition, patients with TBI may suffer from a substantial sense of loss of their “old selves” (i.e., the way they used to be), but they may be in denial and not fully aware of it. Even when acutely cognizant of their sense of loss, survivors of TBI may not understand it or think it is not valid (i.e., justified). When patients sense that what they are feeling or experiencing is somehow wrong or invalid, these feelings tend to be suppressed and hidden, only to make their presence known ultimately by stymieing their medical recovery.

Accordingly, TBI survivors who are actively grieving their loss of function need to be acknowledged in what they are experiencing and their feelings validated, if they are to progress expeditiously through the grieving process. Otherwise, in the absence of a resolution to the patient's grief, bereavement may be unnecessarily prolonged, and along with it, the patient's eventual physical (and emotional) recovery.

While physicians understand that psychological factors may play a key role in affecting a patient's medical condition, they often cannot respond to the emotional needs of the patient within the limitations of a brief office visit. Were they able to do so, or to arrange appropriate referral to psychiatric or psychological specialists, medical compliance and prognosis would be significantly

enhanced. This is particularly true of patients with TBI, who can be especially outrageous in the demands which they make of their health care providers. (E.g., patients with TBI often seem not to comprehend or accept the treatment rationales provided by their doctors for particular medical regimens to which they rigidly and persistently object, or vacillate in their decision-making, resulting in problematic patient management.)

Finally, opportune involvement of a neuropsychologist can prevent the development of psychiatric conditions which can be expected to needlessly hinder the clinical progress of the TBI patient. For example, survivors of TBI who are at risk for manifesting comorbid anxiety or depressive disorders can be properly identified and provided with early psychological intervention. In a similar manner, TBI patients with complaints of cervical pain or headache may receive appropriate psychological attention so as to reduce the chances of their symptoms escalating to a full-blown chronic pain syndrome. Patients afforded timely and appropriate psychological intervention may also be more likely to avoid further physical injury or aggravation of their medical condition.

Conclusion

Traumatic brain injury does not have to be the "silent epidemic" that it has been. Survivors of TBI no longer need to experience their residual loss of cognitive function as a phantom in their lives—invalidating their impairment as well as stealing their dignity and self-respect. An already difficult process of grieving their functional losses and accommodating their medical condition does not need to be exacerbated by denying that a bonafide disorder exists. Survivors of TBI should not have to "go crazy" trying to prove that something is wrong with them. They should not be made to feel that they are "making a big deal out of nothing"—manufacturing or exaggerating

their functional problems when no basis for them exists. Patients with TBI should not be stigmatized with the insinuation that they are faking their difficulties or otherwise malingering.

Clearly, when patients with TBI are responded to in this way by health care professionals, progress in treatment is likely to be hindered. TBI patients—like patients with any medical disorder—are prone to become even more preoccupied and invested in their impairments, when their clinical symptomatology is challenged. The predictable outcome is that everyone loses: patients with TBI are likely to persist in their symptoms, for treatment is not likely to be forthcoming for those not even perceived as having a valid medical disorder. The attending physician is likely to be left with a difficult and uncooperative patient on his/her hands. The patient's family is stuck with a family member who is likely to become increasingly hard to live with. And society loses a once productive citizen, whose impairment might very well have been successfully remediated, to the extent of being returned to substantial gainful employment.

In conclusion, a favorable prognosis is more probable if the patient with TBI is recognized early on, ideally beginning with the attending physician, in consultation as necessary with a specialist in neuropsychology. Timely and appropriate neuropsychological assessment can confirm the TBI diagnosis, yield reliable identification of cognitive deficits, and give rise to suitable neurotraining strategies targeting the specific damaged brain functions of the TBI patient. The subsequent clinical course for the patient with TBI is thereby more likely to lead to a positive therapeutic outcome.

Acknowledgment

We thank David J. Lam, PhD for his helpful editorial suggestions and critical review of the manuscript.

Achieving Better Outcomes for Hawaii's Children

Continued From Page 617

In exchange for making a commitment to work on outcomes and measuring progress over time, NPR will negotiate with appropriate federal agencies to permit more flexible use of funds at the state level through less restrictive regulations. This helps states make the most of federal dollars by allowing spending outside of narrowly defined categories. State agencies, working hand in hand with communities, are encouraged to disperse federal funds so that they can address specific local needs, priorities and support tailor-made solutions to community problems.

The National Performance Review Board is impressed with the broad-based efforts in Hawaii to define important outcomes, particularly with respect to children. The Office of the Governor has been in discussions with Vice President Gore's Office about formalizing an initial partnership agreement with NPR that will focus attention on early childhood outcomes. The Good Begin-

nings Alliance, a private, non-profit organization with statutory responsibility for coordinating improvements to the early childhood system, will play a major role in advancing the terms of this agreement. By working with public and private agencies as well as local Good Beginnings Councils, the Alliance and its partners will help organize a community-based response to ensuring that young children are safe and living in nurturing environments.

Thus, by achieving more clarity on the important goals we wish to achieve, mobilizing communities and providing greater incentives for collaboration towards achieving these goals, we see opportunities for making a difference in the lives of at-risk children. This three pronged approach gives us hope that maybe we indeed can do more with less.



The House of Representatives State of Hawaii

hereby presents this certificate to

BRAIN INJURY AWARENESS MONTH October 1998

WHEREAS, October 1998, has been designated as BRAIN INJURY AWARENESS MONTH to focus attention on the survivors of traumatic brain injury and the support services that they and their families and caregivers need; and

WHEREAS, BRAIN INJURY AWARENESS MONTH will focus on early identification, appropriate, effective, and intense treatment programs that are cost effective, and training family and volunteers to provide quality care in the community; and

WHEREAS, improvements to the treatment of traumatic brain injury reduces the intensity, magnitude, and length of suffering of survivors, thereby raising the overall level of quality of life; now, therefore,

The House of Representatives of the Nineteenth Legislature of the State of Hawaii hereby commends and applauds the Consortium for its commitment to raising public awareness of traumatic brain injury through the designation of October 1998, as BRAIN INJURY AWARENESS MONTH.



The 19th Legislature

Speaker of the House

Chief Clerk

Sponsoring Representative

Life in These Parts

A \$1.17 million grant was awarded to the John Burns School of Medicine and *Ke Ola O Hawaii*, a community based multiprofessional training program. The grant came from the Health Resources & Services Administration of the U.S. Dept. of Health & Human Services and will go for operation of the Statewide Area Health Education Centers (per Senator Inouye)

Straub medic **Lawrence Levin** makes music on the mandolin and guitar with the Irish Hearts Band at O'Toole's downtown.

(Eddie Sherman Mid Week Jul 15)

Three years ago, a mandatory retirement age of 65 forced world renown stroke researcher and neurosurgeon **Bo K Siesjo** at Sweden's University of Lund to come to Queen's Neuroscientific Institute with his research team of seven and \$600,000 in National Institute of Health funds. Medical director of QMC Neuroscience Institute **Marek Mirski** describes Siesjo as "a stroke researcher at the very top of the game...practically a Nobel laureate...He's a giant." Rather than the "10 to 15 drugs in clinical trial for strokes" which will have marginal effect on stroke management, Bo's lab is working on a new generation of nontoxic drugs which would block calcium influx into cells before they die.

Honored, Elected & Appointed

New Straub Chief of Staff: **Roy Adaniya**, pulmonologist, was appointed chief of staff replacing **Robert Flair** who resigned after serving 22 years.

New Straub COO **Gordon Yenokida**, is board certified in internal medicine, pulmonary medicine and critical care medicine and board eligible in allergy and immunology. Gordon was medical director of the Bakersfield California Family Medical Center where he directed a 130 physician primary care system, a 75 member IPA and a specialty network of 245 physicians.

Straub oncologist **Reuben Guerrero**, is the new president of the Philippine Medical Association.

Internist-endocrinologist **Leonard Krystin** has joined the Joslin Center for Diabetes at Straub as medical director.

Miscellany

Q. What do Viagra and Disney World have in common?

A. They both make you wait an hour for a 3 minute ride.

(As told by Pfizer Rep, J. Pang)

During the height of the Middle East crisis, the Israeli President invited the Pope to play a round of golf while they settled the pressing issues. The Pope assembled his Cardinals to find a golfer among them to represent him. But none played golf. Someone suggested that Jack Nicholas was a good Catholic. Why couldn't they make him a cardinal and represent the Pope. So the matter was settled...

Cardinal Nicholas reported back to the Pope after his trip. "Sir I never played better golf, but I lost by 3 strokes to a Rabbi Woods."

(Contributed by another Pfizer rep Mark Mertz)

Waiter to customers: "I'm sorry, but your managed care organization required us to substitute the fish for prime rib."

(Funny Times)

Overheard: "It's so cold this winter that I saw a lawyer with his hands in his own pockets."

(Late Night with Conan O'Brien)

Definition of a true music lover: "A man who, if he hears a woman singing in a shower, puts his ear to the key hole."

(General Features)

Letters to the Editor

(Advertiser Apr 28)

"Hawaii is an interesting place to live. To look at the admissions records of Kamehameha Schools, one needs a court order. Yet HMSA may look at one's medical records (which are more likely to contain private information) at its whim at any time and without your knowledge if you have been a HMSA member.

Yes, Hawaii is an interesting place to live."

Walter Young MD

Notable Omission re the Late Maurice S. Sullivan Contributions:

"The Cancer Research Centers of Hawaii also was a recipient of the immense generosity of Sully and his family.

In 1997, the Center received a \$1 million endowment for M.S. Sullivan Family Chair in Cancer Research.

Through this generous donation, we were able to attract **Dr Thomas Vogt** to become first holder of the chair."

Brian F. Issell MD

Director, Cancer Research Center of Hawaii

Medical Tidbits

Q. Tennis player would like to get a little quicker on his feet. He has tried swimming and jogging and endurance is better, but his speed isn't.

A. Plain running doesn't help tennis players or any other athlete who requires rapid stop and start motions. You need to increase strength and stimulate the fast twitch muscle fibers. You can increase your strength and power by doing weights. A good exercise is high speed peddling on a stationary bicycle. The key is rapid revolutions per minute. This would preferentially stimulate the fast twitch muscle fibers.

Dr. Fitness (Chet Nisenberg)

Advertiser Mar 15

Botulism Derivative used as Wrinkle Remover

More than 65,000 people were injected with botulinum toxin type A in 1997 per American Society for Aesthetic Plastic Surgery. Honolulu dermatologist and cosmetic surgeon **Gregory Herbich** has used botox in more than 100 patients in the past two years to reduce crow's feet and frown lines.

Oncology Conference. Thinner is Better

A 73-year-old oriental man with GI sy's had a sub total gastrectomy for Ca in Situ. Moderator **Ken Sumida** asked surgeon **Junji Machi** (originally from Japan) what he thought about the survival of gastric Ca.

Junji was up-beat. In Japan we have good postop results because patients are thin and extensive lymph node dissection is possible. In Hawaii, the Japanese patients are more obese and node dissection is more difficult. So the outcome is intermediate. In Pennsylvania where I trained, the patients were most obese and node dissection was even more difficult.

Oncologist **Kaye Kawahara** was curious: Do all gastric Ca patients in Japan get oral 5 FU?

Junji: Everyone gets 5 FU. Mucosal CA has 90% survival and overall survival is 50%.

Radiologist **Kanemori** was dismal: In the U.S. survival is 10% depending on the stage.

Potpourri

The patient was lying in bed, still groggy from the effects of the recent surgery. The doctor came in, looking very glum.

"I can't be sure what's wrong with you," the doctor said. "I think it's the drinking."

"Okay," the patient said. "Can we get an opinion from a doctor who's sober?"

"I'm so worried," the nervous patient said as the nurse plumped up his pillows.

"Last week, I read about a man who was in the hospital because of heart trouble and he died of malaria."

"Relax," the nurse said, smiling. "This is a first rate hospital. When we treat someone for heart trouble, he dies of heart trouble."

On a stifling hot day, a man fainted in the middle of a busy intersection. As traffic began to pile up in all directions, a woman rushed to help him. As she knelt down to loosen his collar, a man emerged from the crowd, pushed her aside, and said, "It's all right, honey. I've had a course in first aid."

She stood up and watched as he took the man's pulse and prepared to administer artificial respiration. Then she tapped him on the shoulder.

"When you get to the part about calling a doctor," she said, "I'm already here."

Continued on Page 636

Conference Notes

Acute Exacerbations of Chronic Bronchitis
Lecture by VP **Ronald Grossman**, Prof Medicine, Univ. of Toronto, Ontario, Canada: QMC, Fri am, July 31

Chronic Bronchitis:

Clinical dx: excessive cough, productive, lasting 3 mos to 2 years.
Risk factors: smoking, dust, air pollutants
Cost: 14 x 10⁶ physician visits/yr in U.S.

Classification of Chronic Bronchitis:

Class I

Acute tracheobronchitis

Criteria or Risk Factors:

No underlying disease

Pathogens:

Usually virus

Treatment:

1st: None unless sy's persist

2nd: Amoxicillin or macrolide

Class II

Chronic bronchitis

Criteria or Risk Factors:

FEV₁ > 50%

↑ sputum vol or purulence

Pathogens:

H. Flu

M. Catarrhalis

S. Pneumoniae

Treatment:

1st: Amoxicillin or Cipro (if H. Flu prevalence)

2nd: Cipro, Augmentin or macrolide, tetracycline, or trimet/sulfa

Class III

Chronic bronchitis c complications

Criteria or Risk Factors:

FEV₁ < 50% ↑ sputum vol & purulence; elderly, or comorbidity

Pathogens:

Same as Class II

Also K. pneumoniae

P. aeruginosa, other gm neg

Treatment:

1st: Cipro

2nd: 3rd gen cephalosporin, Augmentin, or Zithromax

Class IV

Chronic bronchial infection

Criteria or Risk Factors:

Same as Class III plus yr long production purulent sputum

Pathogens:

Same as Class III

Treatment:

1st: High dose Cipro or parenteral Cipro; Imipenem-clastatin or ceftazidime followed by high dose Cipro

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The Neuropsychology Department at Hawaii State Hospital

Continued From Page 621

ously underserved populations such as schizophrenics are being developed. This is a particularly exciting area as cognitive deficits have recently been shown to be a rate limiting factor in the recovery of this population.⁶ Finally, the department has started work on the second edition of the neurotraining book that was published in 1981.

The first 25 years has certainly been a productive and innovative one for the Hawaii State Hospital Neuropsychology Department. With our current projects and community support we hope to continue this legacy for the next 25 years and beyond.

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Our forefathers threw out the British to relieve us of a fat, insensitive wasteful government—Nice try, guys.

That wonderful bureaucracy, Health Care Financing Administration, has done it again. To curb abuses in the home health industry, Stark II of the Balanced Budget Act of 1997 requires owners to post a \$50,000 bond for anyone who supplies durable medical equipment, prosthetics or orthotics. In aiming to eliminate the cheating companies that give fake addresses, provide false billing, and fail to provide services, HCFA has gone overboard. HCFA defines cataract eye glasses as durable medical equipment, so as it stands right now, any optical shop providing for Medicare patients after eye surgery will have to post a \$50,000 bond. You know they are off base when even doctor-acting Pete Stark has said that HCFA is wrong.

Don't be first. Don't be last. Never volunteer. (Motto USMC)

When no doctor answered the request over the cabin address system, the flight attendant found me. I was asked to evaluate an exhausted, overweight, sick, male tourist returning to Chicago. He admitted to gorging and boozing at a Kaanapali luau before departing for the airport, and the captain was considering an emergency landing in Denver. After examining the man, I did not recommend an emergency landing, and United Air Lines in a gesture of gratitude for saving them big \$\$\$, sent me.....a putter (and I don't play golf). The next time you are high in that huge kerosene queen of the skies, you might be called to render first aid to a passenger in distress. Previously, airlines provided a very modest medical kit, but now American Airlines expects to have defibrillators installed on all domestic and international flights. United and Delta are expected to follow suit this summer. Also, they plan to install expanded kits containing medications to treat heart attacks, diabetes, asthma, and allergic reactions. Defibrillators are not required by FAA regulations, but the Feds are reviewing their standards. Congress recently passed legislation that protects airlines and individuals from liability in passenger medical emergencies, and President Clinton signed the law.

Exceptions prove the rule, and wreck the budget.

Who should pay for *Viagra*? Federal health officials have been notifying states their Medicaid programs must pay for *Viagra*, but announced that policy may be discontinued if it becomes evident that the drug is being abused. Abused?? Who would decide, Martha Stewart, Hugh Hefner, Dr Ruth, Billy Graham, Dear Abby, or perhaps the *Viagra* poster boy in the Oval office? *Pfizer Inc.*'s new impotence drug has a retail price of \$10/pill, and some insurers, such as *Kaiser Permanente* in Oakland and *Aetna/U.S.* Healthcare won't cover the drug because of cost. Kaiser estimated an expense of \$100 million a year if it covered *Viagra*. Two other major health insurers *Prudential Ins. Co of America* and *Humana Inc.*, have decided not to pay either, but they are citing concerns over risks, claiming that they were not assured of the drug's long term safety. As of mid-June, the FDA had received about 30 reports of men dying after taking *Viagra*, but many of these were elderly and had known serious health problems. Since the drug became available in April, about 2 million men have used the drug. Medical industry analysts have said the real concern is cost not safety, but since managed care is the prime example of what is wrong with health care, they fear denial on the basis of cost.

Teamwork is essential. It allows you to blame someone else.

Item - The recent AMA House of Delegates meeting in Chicago brought forth an anguished cry from around the country over the planned evaluation and management (E&M) codes that HCFA is intending for Medicare documentation. The truth is that organized medicine helped create this monster, but supposedly did not recognize what would ultimately arrive. HCFA has delayed implementation for the present, but eventually the bean-counters will force this upon us. In fact, the ophthalmology codes were well organized and structured, and found to be acceptable. Sadly, the other specialty organizations failed to similarly prepare, and got the "garbage in - garbage out" result.

ITEM - Regarding the *Sunbeam* fiasco, the House turned up the heat on the Trustees, but could get few answers on monetary damages, not for lack of candor, but because so much is hanging in legal limbo. Suffice to say, there are many bills yet to pay, big time.

ITEM - E. Ratcliffe Anderson MD (he wants to be called Andy, not Ratty) the new executive vice-president (CEO) was introduced, and gave a rousing speech. He has the daunting task of restoring confidence and trust in the leadership.

ITEM - The next interim House of Delegates meeting will be in Honolulu in December at the Hilton, so plan to attend at least one session and observe this most democratic of all medical assemblies. Would that our AAO Council were similarly empowered!

The art of medicine is to amuse the patient until nature cures the disease.

How many of your patients are into alternative therapy for medical problems? A study in the journal of the American Academy of Pediatrics revealed that 51% of families (those without cancer) indulged in alternative therapies, while 65% of families with cancer used alternative treatments. Specifically, the healing practices used were therapeutic massage, acupuncture, imagery, energy healing, prayer and medicinal herbs. Putting it more simply, at least half of your patients are not content with your therapeutic prescription, but resort to addition or substitution to obtain the desired end. Personal experience here on Maui is that some of my "organic" patients first used mother's milk or herbal tea before seeking help for a red eye.

If you want a friend in this life, get a dog.


That warm and fuzzy, lovable Hawaii Blues organization (HMSA), has decided to send questionnaires to our patients asking them to evaluate the care received from their doctors. Some patients have been surprised and confused by the forms, and wonder if the doctor is being investigated for misbehavior or malpractice. The pretense is to "award" good physicians, but of course, the opposite effect is perhaps just as likely. That is, doctors could be reprimanded by HMSA for negative reports when patients perceive an unnecessary delay, or too short a visit, or the doctor was uncommunicative, or whatever. Let us balance this interrogative. Why not evaluate the health plan as was done by the MEDSTAT Group in New England. 81,000 patients and 40,000 physicians across the country were asked to rate their satisfaction with various health plans. In a similar action, in February the Department of Health and Human Services surveyed 130,000 Medicare beneficiaries asking them to rate their managed-care plan on a scale of 1 to 10, and later they will survey fee-for-service plans. Its is time! Let's find out if you like your health plan with a series of pointed questions about delays, coding systems, telephone responses, downgrading claims, appeal mechanisms, etc.

The C students run the world.

The Clinton administration caused a flurry of excitement when it filed suit against *United Parcel Service* for refusing to hire drivers who have "monocular" vision. The Americans With Disabilities Act (ADA) awarded damages to a former Omaha policeman who had lost sight in one eye, and suffered peripheral loss in the other. The police chief refused to rehire the man and the ADA awarded \$200,000. In another case the employer prevailed in court when it dismissed a forklift truck driver who was blind in one eye, and had three forklift accidents. As every eye surgeon knows, there is a great difference between the "blindness" of 20/200 visual acuity and absence of an eye. Moreover, occupational risks such as construction labor or police work, cannot be compared to a maritime officer or taxi driver, yet that is what the ADA and the EEOC rules imply. The issue demands a careful professional opinion and not an arbitrary statutory rule, and the law should be so structured.

Addenda

- ❖ Oscar Wilde's father was an ophthalmologist and in 1853 was the first appointed ophthalmologist to Queen Victoria.
 - ❖ Moderation is a fatal thing. Nothing succeeds like excess. (*Oscar Wilde*)
 - ❖ The average human eye takes 14 years to grow to its maximum size.
 - ❖ Medical fact: pigs can catch swine flu from humans.
 - ❖ Never kick a fresh turd on a hot day. (*Harry S. Truman*)
- Aloha and keep the faith—rts ■



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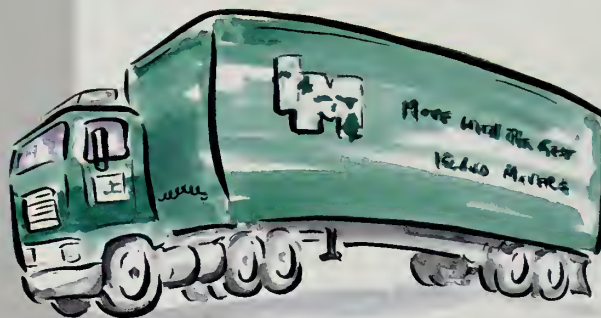
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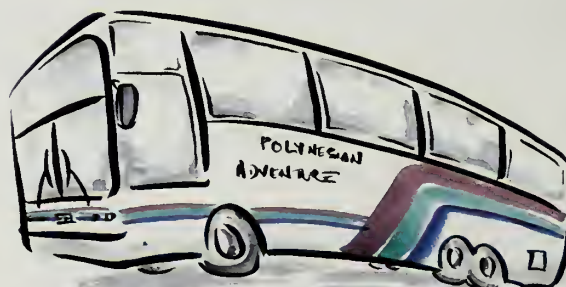


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Ē Pele Ē

Depicting the goddess of Hawaiian volcanoes
surrounded by images related to her myth

A Call to Physician Authors

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Norman Goldstein MD

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Every medical student at the John A. Burns School of Medicine, as well as most practicing physicians, know of the vast reference material available at the Hawaii Medical Library. The journal and book collections, the computer access programs, and especially the knowledgeable, helpful Library staff enable us to keep right up to date with our practices, our research and teaching curricula.

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Our legislators, Hawaii hospitals and physicians and, yes, even attorneys, should be encouraged to continue to support the activities of CHIS at the Hawaii Medical Library.

Cancer Pain Guidelines: Are They Being Used?

This excellent manuscript on page 655 by Pat Kalua, RN was to appear in our Special Issue on Pain. This issue has been delayed because of updating manuscripts as well as production problems. It will hopefully be published in January 1999.

The Kalua manuscript is so important, in view of the recently completed Governor's Blue-Ribbon Panel on Living and Dying with Dignity—we publish it at this time. Look forward to the Pain Special Issue.

An Assessment of Hawaii Quest Medical Plans Performance Using Medicaid HEDIS Measures, 1996-1997

Because of initial controversy and questions about the Hawaii QUEST programs, Lynette Honbo, MD Medical Director of the MED-QUEST Division of the State Department of Human Services, was asked to submit this Assessment of QUEST on page 662.

As Director, she supervises 15 healthcare professionals in the

Medical Services Branch and helps to clarify the QUEST Medical/Dental/Behavioral Health and Pharmacy benefits of QUEST as well as the Medicaid fee-for-service programs and the QUEST-NET program. Mahalo, Lynette and Matthew Loke, Ph.D.

On a personal note, Lynette is married to OB/GYN Clayton Honbo MD.



President's Message

Where do we go from here?

**Leonard Howard MD
President, Hawaii Medical Association**

In this, my last message to you as your president, I would like to make some observations about the practice of medicine in Hawaii as seen from the heart of the Hawaii Medical Association. This has been a year of relevancy. Everything that we have done this year has been directed towards being relevant to the practice of medicine. The results have been equivocal. On the plus side, the physicians of Hawaii are now seen by the lay public as speaking more with a single viewpoint than ever before. More points of view are now being represented in the consensus voice of medicine. Our voice is being heard in more task forces, more focus groups, and more socio-political arenas than ever before. This is what we set out to do during this past year.

So what are the results of this course of action? Our membership is roughly what we started with last November, but the rotating door has never stood still. If we could ever figure out how to retain members our dues problems would be solved. The problem is that physicians in a tight economic market do not see an immediate return on the money spent for HMA/AMA membership. I would venture to say that membership in Specialty societies, if judged by the same immediate return on investment, would also come up wanting, but for some reason are given priority over the HMA and AMA. I am a life member in my specialty organization, but do not see how it provides any more immediate return than does the HMA.

In our quest for relevancy we find the need for considerable staff support. In the legislative arena we need four full-time people to maintain our presence in the big square building, in addition to the many physicians who donate many hours each week to present testimony. The committee work necessary to support the legislative process is tremendous, but the cost of this support is never mentioned as an immediate benefit of membership. Ask yourself if you personally have the time to spend in the committee hearings, presenting your own testimony. If you are not there, don't you think there should be someone there representing your interests? To do this costs money. Money comes from members. It is your choice.

I do not see any prospect for any less managed care in the future, since the demand for more and more care will ever increase as the percentage of our population that is in the Medicare age group increases. The whole concept of medical ethics is changing. Many of the injunctions of the original oath of Hippocrates are ignored in current medical practice, and the oath itself has been often rewritten to be more politically correct. Yet one of its legacies is the demand

that a physician, if unable to heal or cure, shall do no harm. To some physicians, this means that they must do everything possible to ensure the physical well-being of their patients, or more problematic, everything that might help their patient. Many patients and policymakers have the same expectations. In economic terms, this means that we are required by medical ethics to devote such resources to the care of our patients that the marginal effect of the last dollar spent approaches zero. If we follow this injunction rigorously, we can easily spend our entire gross national product on health care many times over. Thus the shift of managed care or managed-cost. The new ethic of health care says "Perform procedures until the marginal health benefit is greater than or equal to the marginal monetary cost." This new ethic results in less medical care, but it ensures that whatever we get for the expenditure of the health-care dollar is worth the cost of providing the care. Physicians and healthcare administrators for most of the post-World War II period were encouraged to believe that money should never be a consideration in the medical decisionmaking process. Today, we are being told that money should always be considered. Moreover, the decisionmakers in healthcare financing gravitate towards a cost-benefit standard - a collectivist standard not always in the best interest of individual patients.

It is for this reason that organized medicine must continue to represent the patients in this social equation. This can only be done when organized medicine has the financial and staff assets to be part of the bureaucratic decisionmaking process. If organized medicine is unable to continue to function in our society, the practice of medicine will truly become a service industry rather than a profession, something that many social planners are strongly advocating at the present time. It is only by flexing the muscle that comes through unity that we will ensure our ability to practice our profession. This requires that every physician who wishes to continue to practice as a professional do their part to support organized medicine. If we do not do so, the medical profession as we know it will disappear and we will have only ourselves to blame. The choice is ours. I pray we make the right one.



Medical School Hotline

An Update on the USMLE Performance of Medical Students at the John A. Burns School of Medicine and Computer-Based Testing

Gwen S. Naguwa, MD

Associate Dean, Office of Student Affairs

As reported in this annual update on the United States Medical Licensing Exam (USMLE), the students at the John A. Burns School of Medicine (JABSOM), continue to do well, especially on the Step 1 exam. Also, at its June 1998 meeting, the Composite Committee, which consists of members representing the Federation of State Medical Boards, the National Board of Medical Examiner and Educational Commission for Foreign Medical Graduates, formally voted to implement Computer-Based Testing (CBT) beginning in 1999.

Students in the JABSOM Class of 2000, who challenged the Step 1 exam this past June, achieved a post-Problem-Based Learning curriculum high passing rate of 98%, compared to the national passing rate of 95%. The mean score for JABSOM students was identical to the national mean of 216. The passing rate for our current seniors on the Step 2 exam, taken in August 1997, was 96%, as compared to the national rate of 95%; however, the mean score for JABSOM students was 214, slightly higher than the national mean of 209. As before, although the National Board of Medical Examiners steadfastly states that it is a licensing exam and should not be used as a method of evaluation of curricula, the faculty continues to feel that the students' performance is an indication that they have mastered the skill of learning, or at least solved the problem of how to pass the USMLE.

As a brief review, the USMLE is the only path to licensure in the U.S. and its territories, and a passing score in all three steps is one of the requirements. Step 1 is designed to assess a student's ability to apply knowledge and understand key concepts of basic biomedical science, with an emphasis on principles and mechanisms of health, disease, and modes of therapy. The Step 2 exam is to determine whether a student can apply basic science knowledge and

understand the clinical science necessary to care for patients under supervision, and now includes health promotion and disease promotion. Step 3, usually taken near or after completion of one postgraduate year of clinical training, assesses the ability to apply the medical knowledge and understanding of biomedical and clinical science considered essential for the unsupervised practice of medicine with emphasis on patient management in ambulatory setting.¹

While the purpose and fundamental content of the USMLE will not be affected significantly by the conversion to the computer-based format, the effect of the Composite Committee's



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decision to proceed with the conversion in 1999 means that the standard large-group paper-and-pencil exam will no longer be offered. Instead, beginning in April 1999 for Step 1, July/ August 1999 for Step 2, and October 1999 for Step 3, eligible candidates will be able to self-schedule their exams at any time at one of over 1,500 Sylvan Prometric Test Centers around the world, or at an approved Medical School Center. Consequently, it is anticipated that the last administrations of the paper-and-pencil exams will be October 1998, March 1999, and May 1999 for Steps 1, 2, and 3, respectively.

As previously noted in our 1997 update, the major rationale for the switch to CBT was concerns regarding exam security and the advantages of the format for enhancing assessment methods and flexibility in scheduling. The physical security of the exam will be controlled through computerized, electronic transmission of encrypted data, and the proctoring of examinees will be aided by use of audio and video monitors. Also, hundreds of content-parallel test forms created from very large banks of test questions will be used on different days, in different locations, and even on the same day in the same center.²

New assessment methods will include clinical and laboratory simulations and multimedia presentations of sounds and images, as well as adaptive testing, which involves altering the difficulty of subsequent blocks in response to an individual's proficiency to improve the precision of the final score. However, while the blocks may vary in average difficulty, they will meet the same content specifications and, therefore, every examinee will be tested on equivalent content.

Implications of the scheduling flexibility for students have many medical schools struggling to anticipate and respond to its impact on curricula and scheduling. For example, schools which require students to take or pass Step 1 in order to progress to the third year will be faced with the logistical problem of insuring that sufficient resources exist to examine all students in what is anticipated to be a short period of time, or whether to grant delayed start dates to those who choose not to or are unable to take the exam prior to the scheduled start date. However, the shortened score report date, which will eventually be two weeks as compared to the current seven weeks, will be a distinct advantage in initiating appropriate remediation.

In response to the concern regarding having a sufficient number of computer stations for our students, and the belief that this format will become a significant part of the future assessment methodology, JABSOM has submitted a request to the National Boards to become an exam site by May 1999. Hawaii currently has only one Sylvan Technology Center (in Kailua), which plans to expand from its current four stations to eight by April 1999, but also administers licensing exams for a number of other specialists, including paramedics, nurses, medical technologists, and air traffic controllers. Given the structure of our current curriculum it is anticipated that the majority of our students would prefer to take the Step 1 exam after the end of their second year and before the start of their third year, a span of approximately three weeks. The exam, which is seven hours long with a total of one hour of break time, would require exclusive use of the Sylvan Center's eight stations for nearly 10

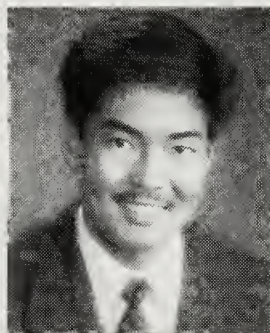
days, given additional time for those needing special accommodations, etc. for our students alone; a situation Sylvan will not guarantee. The proposal for JABSOM to become a Medical School Center represents a significant investment in terms of space and resources, but reflects our commitment to our students and remaining at the forefront of advances in medical education.

In summary, JABSOM students, under the Problem-Based Curriculum, have continued to improve on their ability to pass the USMLE, especially on the Step 1 exam. It is anticipated that, given there will be no change in the exam content and the students will receive support from the medical school in the form of our own test center, conversion to the computer-based testing format should not have any significant impact on their future performance.

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Straub is pleased to announce that Vern Sasaki, MD, has joined the Occupational Medicine Department and is currently seeing patients at Straub Beretania.



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Commentary

Change in Medical Care Has Come Too Fast

Reprinted from the Honolulu Advertiser, July 1998

by Frederick C. Holschuh MD

I have seen the enemy: It is not only disease and suffering but denial of care and disruption of the patient-doctor relationship.

We now save public funds by not offering routine adult dental care, and yet, in the emergency room I see patients daily with dental abscesses and facial infections, often requiring costly antibiotics and/or hospital admissions.

We discontinue programs for alcohol and other drug treatments, and then pay horrendous amounts in money and human suffering for the end results of substance abuse: violence, ravaged minds and bodies, the spread of viral infections and damaged fetal brains.

Prior to the managed-care approach to cost control, it was not uncommon for a young man to drop into an emergency room for pain medication rather than wait for an appointment, just so he could get to the beach sooner; or, for patients to tell me they had changed their disability from "back pain" to "psych" because it was easier to scam the system.

Change was needed, but it is going too far, too fast.

We physicians do not feel that all is lost, even with the horrendous Mainland examples of managed care that is obscene in its denial of benefits and care to patients and the treatment of physicians.

Locally, legislation has passed to allow patients to seek emergency room care when the patient feels it is an emergency, and that provides for protection for the patient in a patients' bill of rights.

We must seek an appropriate balance, never forgetting that the patient must always be the focus.

Managed "fright"

My physician colleagues and I know there have been dramatic, chaotic and sometimes frightening changes in our health care delivery system. For physicians, the "fright" is simply to wake up one morning to find that all of your patients have been taken to some other "provider of care" and that reimbursements will continue to be slashed.

For patients, it is the restrictions on benefits, the denial of care, the inability to see a physician of their choice, and the loss of "connection" with their doctor.

For both patients and physicians, it is frightening to lose control of decision making.

The changes are in large part due to the phenomenon called "managed care" — or what we physicians see more as "managed cost" — much to the detriment of patients.

I believe every patient should have a "choice" of health care delivery system, whether it be closed-panel health maintenance organization, large multi-specialty clinic or independent private physician. In the recent past, the physician and the patient decided together on care options; now, the decision and choices are taken away by the "payer" or insurance company health plan.

The managed part of health care arose because of abuse and waste in the health care system. Many other sectors of our society also experience abuse and waste but have not been taken care of by the most restrictive and burdensome governmental regulations that we see in the health care industry.

Patients must act

Now thankfully, the patient and the doctor — as the patients' advocate — are challenging the managed care organizations and their counter-productive bottom-line mentality at the expense of the patient.

The only way to bring back true patient-physician decision-making in health care is for our greatest allies, our patients, to demand that it be done.

Fred Holschuh MD is an emergency room physician at Hilo Medical Center. He was named 1998 Physician of the Year by the Hawaii Medical Association.

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Harry L. Arnold Jr. MD Case of the Month

Eosinophilic Meningitis / Angiostrongyliasis From Eating Aquaculture-raised Snails: A Case Report

Christopher M. Marsh MD

A 68-year-old recently-retired Chinese-American telephone switchman developed a headache and a short-lived papular rash about one week after eating home-cooked ("Chinese style"; stir-fried) fresh snails, a gift from his neighbor, a home aquaculturist. He developed worsening confusion and hallucinations, fell twice at home, and was admitted to the hospital. His medical history was remarkable for mild hypertension and gout. Routine medications were nadolol, colchicine, and probenecid.

Examination revealed that he was alert and oriented to month and year, but not to day or date; he was unable to perform "serial sevens" or "serial fives." Vital signs and general examination were unremarkable. Fever and meningismus were absent. Laboratory tests were normal except for serum sodium of 118 meq/dL. Several normal serum sodium levels had been documented during the years

prior to this illness. MRI scan of the brain was normal.

After hospitalization and IV fluid administration hyponatremia was corrected, but his condition worsened. He began to hallucinate, seeing imaginary people and objects in his room. Agitation, and acute urinary retention developed. Lumbar puncture revealed cerebrospinal fluid (CSF) white blood cell count 1,300, with 73% eosinophils; glucose was 31 mg/dL, protein was slightly elevated. All cultures and stains were negative. He was treated supportively for a diagnosis of eosinophilic meningitis. Empiric therapy for tuberculous meningitis was administered for one week.

Repeat lumbar punc-

ture two weeks later revealed moderate improvement in the CSF eosinophilia. However, he remained delirious and delusional, with hallucinosis. Transfer to a care home for six weeks was required before his family was again able to care for him. Bladder catheterization was successfully discontinued shortly thereafter. Mental function improved slowly, although twelve months following onset of illness, he remained unable to perform "serial sevens" calculations.

Serology specimens were sent to the Faculty of Tropical Medicine in Thailand.¹⁰ Results revealed *Angiostrongylus cantonensis* antibody titers of 1:3200 by ELISA; *Gnathostoma spinigerum* antibody by Western blot was "weakly positive". There may be considerable cross-reaction among helminthic antigens within these tests.

Gnathostomiasis^{1,6} typically causes painless migratory subcutaneous swellings lasting several days, and subsiding spontaneously ("larva migrans"). Immature worms can cause eosinophilic meningitis when they migrate to the CNS. The usual presenting symptom is sharp, agonizing cranial nerve root pain, or sudden impairment of sensorium due to cerebral hemorrhage. CSF is usually bloody or xanthochromic. Snails are not a known host of *Gnathostoma spinigerum*.

Although presenting some unusual features, the clinical diagnosis of eosinophilic meningitis due to *Angiostrongylus cantonensis* is unequivocally established in this case based upon CSF results, serology, ingestion of snails, and the clinical course of the illness.

Discussion

Almost all cases of eosinophilic meningitis are caused by *Angiostrongylus cantonensis*, the nematode lungworm of rats. Other parasitic helminths (e.g. *Taenia solium*, *Paragonimus westermani*, *Gnathostoma spinigerum*) may rarely cause CSF eosinophilia, but usually as part of distinctive illnesses (cerebral cysticercosis, etc.) readily distinguished clinically from *Angiostrongylus cantonensis*. The first human case of eosinophilic meningitis was reported in Taiwan in 1944, followed by thousands of cases in Southeast Asia and the Pacific basin over the ensuing fifteen years. *Angiostrongylus cantonensis* was first etiologically linked to eosinophilic meningitis in Hawaii and Tahiti in 1962.^{1,4} The first case from mainland China was reported in 1984,² and the first case in North America in 1995.³

Angiostrongylus cantonensis is a zoonosis affecting rats as the primary hosts. Several land mollusks (over 40 species of snails and slugs) are the intermediate hosts. A number of land planaria, freshwater prawns and crabs, frogs, and occasionally swine and cattle may serve as paratenic, or "carrier" hosts, but do not directly participate in the life cycle of *Angiostrongylus cantonensis*.⁴ *Achatina fulica*, the giant African land snail, was introduced progressively across the Pacific, both willfully and unintentionally, during the 1940's and 1950's, and has played a major role as an intermediate host in the dissemination of *Angiostrongylus cantonensis*.⁵ Rats infected with *Angiostrongylus cantonensis* have been found in all areas reporting eosinophilic meningitis.

Human infections are usually acquired by accidental or purposeful ingestion of raw or partially cooked terrestrial mollusks, planaria, and freshwater crustaceans containing infective larvae. Ingestion of contaminated water or vegetables are other possible sources of infection. The incubation period is about one week. Clinical manifestations typically consist of severe headache, paresthesias, occasionally meningismus and cranial nerve palsies, and rarely



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fever. The eye may become involved, occasionally with permanent visual impairment. The majority of cases are self-limiting, with acute symptoms lasting for one to two weeks. Rare residual neurological symptoms (diplopia, ataxia) usually resolve within several months. Incomplete neurological recovery is probably seen in less than one percent of cases.

Exceptionally severe cases, and chronic cases, have occasionally been reported. Pathogenesis of eosinophilic meningitis involves migration of third stage larvae via the systemic circulation to the brain (and spinal cord), where they die, causing an intense inflammatory, eosinophilic reaction. In the primary host, the rat, the larvae migrate within the brain, eventually reaching the subarachnoid space.⁶ Several autopsy studies of fatal human eosinophilic meningitis have found parasites, and oval worm tracks, throughout the white matter of the brain and spinal cord.¹ Characteristic abnormalities on brain CT have been reported. No pathological studies of completely recovered cases of eosinophilic meningitis were found in this literature review.

Diagnosis is based almost entirely on the clinical presentation, the marked CSF eosinophilia (and occasionally demonstration of larvae in the CSF or anterior chamber of the eye), and a history of exposure to (ingestion of) an intermediate or paratenic host. About 60% of cases have peripheral eosinophilia; all have CSF eosinophilia of greater than 20% of total CSF white blood cells, at some time during the course of illness. Patchy lung infiltrates and other abnormalities on chest X-ray have been described, primarily in children.⁷ Presentation can rarely resemble bacterial meningitis with meningismus and fever. Urinary incontinence, ataxia, and cranial nerve palsies are symptoms which demand consideration of alternative diagnoses (tuberculous meningitis, syphilis, etc.) when present. Our patient was treated with antitubercular antibiotics for about one week until tuberculosis was confidently ruled out.

Several serological tests for *Angiostrongylus cantonensis* have been evaluated. The only test with promise is an enzyme-linked immunosorbent assay (ELISA) test.⁸ The detection of serum antibody is much more sensitive than that of CSF antibody; sensitivity for IgG antibody is greater than for other antibody classes.⁹

There is no specific effective treatment for eosinophilic meningitis. Several antihelminthic agents (primarily thiabendazole, anecdotally ivermectin etc.) have been evaluated, with inconclusive and inconsistent results. It is thought that live larvae may be less antigenic to the brain than dying or dead larvae, so that antihelminthic

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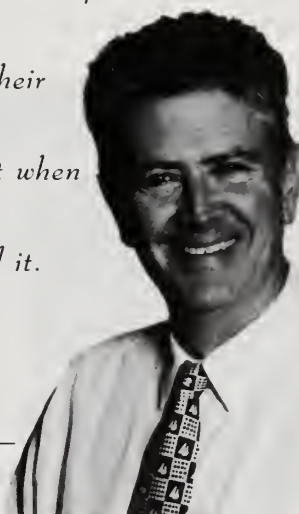
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treatment could exacerbate symptoms.¹ The vast majority of cases recover fully with supportive care. Severe symptoms appear to be often due to increased intracranial pressure, and repeated lumbar puncture has occasionally caused marked improvement. Corticosteroids have not been found to be of any value, although several anecdotal cases of improvement with corticosteroids in patients with presumed increased intracranial pressure, were found in a literature review.¹ However, as this case demonstrates, eosinophilic meningitis is a disabling and sometimes prolonged illness, often requiring hospitalization, expensive diagnostic testing, and occasionally prolonged post-hospital institutional care.

Presentation with acute delirium and hallucinations, the severe hyponatremia, and the prolonged duration of dementia (three months) seen in this case are all somewhat unusual for eosinophilic meningitis. No previously published cases of eosinophilic meningitis presenting with severe hyponatremia were found in this literature review. Published case studies of eosinophilic meningitis, reporting a preponderance of complete neurological recovery, do not specify the extent of follow-up neurological examination. Detailed mental status examinations, or evaluations of cognitive performance, may not have been done. Since parasites invade and damage brain parenchyma (to some degree) in man prior to their death, it seems surprising that complete neuropsychological recovery would be the common outcome. Our patient has persistent, moderately severe acalculia. Although this was not tested prior to his illness, he had very recently retired from a job requiring an understanding of mathematics, and had successfully conducted a small catering business for many years.

Our patient's aquaculturist neighbor reportedly sells most of his produce to local hotels and restaurants for preparation of "escar-

gots." Since *Angiostrongylus cantonensis* is well-established in Hawaii, it is not surprising that fresh water aquaculture of one of its intermediate hosts would be susceptible to infestation. Presumably, pharmacological antihelminthic treatment for *Angiostrongylus cantonensis* would not be possible in such an environment, without also damaging the snails.

Telephone contact, on several occasions during the course of this case, to the Hawaii Department of Health, disclosed that eosinophilic meningitis is not a "reportable disease" in the United States or Hawaii, and therefore, not under the purview of the Department, or of any other state regulatory agency that they were aware of, even though the aquacultured snails are being sold commercially. However, the Centers for Disease Control in Atlanta, Georgia, would be interested in hearing about any further cases, particularly from an aquaculture source (personal communication).

Special thanks to Thomas S. Reppun, MD, Diagnostic Laboratory Services, Inc, for assistance with the serological testing.

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Cancer Pain Guidelines: Are They Being Used?

Results of a Multi-site Study Conducted by the Hawaii Cancer Pain Initiative

Patricia M. Kalua, RN, BSN, MAOM

This study assessed patients' knowledge, experience and satisfaction with their cancer pain management, explored professional documentation and assessment practices and the presence or absence of institutional infrastructures that support pain management. The findings were then compared to the recommended standards and guidelines published by the World Health Organization, American Pain Society and Agency for Health Care Policy and Research.

Introduction

It is well documented that approximately 85% of patients with cancer experience pain during the course of their illness or treatment.^{1,2} The literature also suggests that only 70% of all cancer patients experiencing pain feel that their pain management is effective.³ Studies of pain and patient satisfaction find that patients often rate their satisfaction high even when pain is severe, "suggesting that patients do not expect consistent pain relief and that the use of patient satisfaction questions without other questions about pain ratings may overlook suboptimal pain relief." Hill states that although appropriate opioid analgesics and knowledge about pain is widespread, cancer pain is still widely uncontrolled.⁴ Portenoy believes that undertreatment by practitioners is the primary reason for unrelieved cancer pain although 70% to 90% of this pain can be relieved through pharmacological methods alone.⁵ The World Health Organization (WHO) devised an analgesic "ladder" approach to cancer pain management based on "the premise that most patients...should have adequate pain relief if health care providers learn how to use a few effective and relatively inexpensive drugs well and administer them...according to the individual needs of the patient."⁶ It is estimated that the use of the "three step ladder" devised by the WHO for use in controlling cancer pain effectively controls pain in 71%-97% of patients.⁷ However, with the increasing number of adjuvants and analgesics available for use in different strengths and by different routes, factors such as cost, equianalgesia and patient preferences must be considered when defining a pain treatment plan.

Assessment and documentation are essential for successful pain management, providing the baseline data from which prescribing and treatment decisions are made. The AHCPR Clinical Practice Guidelines for Management of Cancer Pain state that "pain management should be evaluated at points of transition in the provision of services to ensure that optimal pain management is achieved and maintained."² The APS suggests that standardized assessment and communication is the key to successful pain management.⁶ Gathering data and documenting the current status of pain management are important prerequisites to implementing change. Recent studies

show that nurses do not always document patient and family teaching or follow the nursing process which requires assessment and ongoing evaluation of patient care and goals.¹² A recent study in Holland of the effects of a continuing education program on nurses' practice in taking pain histories, performing assessments and managing pain showed an increase in the quality of these activities but not in related quantitative activities such as use of pain rating scales. The nurses participating in the study attributed this phenomena to a lack of support from physicians, varied prescriptive practices, a lack of administrative policies supporting a change in practice and their own reluctance to change their daily routine.¹³ For cancer pain management to become an integrated standard of practice "the challenge of implementation requires involvement by many individuals within the institution."⁸ Since the majority of cancer patients in Hawaii receive their primary and secondary treatment in Honolulu, the importance of standardizing education, assessment and documentation cannot be underestimated.

The research questions this study addressed include:

- 1) Is there a significant relationship between patients' level of comfort, knowledge about and satisfaction with their pain control?
- 2) Is the WHO Analgesic ladder in widespread use?
- 3) Are the recommendations from the AHCPR and APS guidelines for assessment and documentation reflected in current procedures, policies and practices?

Methodology

This study was conducted over a one-year period in seven major medical centers on the island of Oahu. The Institutional Review Board of each medical center approved the study. Primary data was gathered using a patient questionnaire, chart review and an institutional audit tool. The questionnaires were systematic adaptations of tools from the City of Hope Medical Center and used an analog scale to assess patients' level of pain or agreement or disagreement (0-10; 0 = disagree, 10 = agree) with professional beliefs about cancer pain and its management. Each co-investigator was trained in the use of the tools, in assessing a patient's ability to use the questionnaire and in obtaining a signed consent to participate. Each questionnaire took approximately 15 minutes to complete. Any patient concerns or questions about pain that arose as a result of this study were reported to the participant's physician.

The chart review tool was also a systematic adaptation of the tool used by the City of Hope Medical Center. This tool was used on the day the questionnaire was administered to evaluate the types and

methods of assessment and documentation that were being used by various professionals and to record the medications that were currently ordered and being used by each patient. The institutional audit form was also a replication of the tool used at the City of Hope Medical Center. It was used only once in each setting to determine if policies, procedures and institutional processes were in place to insure quality pain management.

Inclusion in the non-random sample required participants to speak English, have a primary diagnosis of cancer and they must have been on at least one opioid for non-surgical, cancer-related pain. Due to reorganization of the oncology units in two of the medical centers and a large population of patients who were non-English speaking or unable to participate due to their physical condition, the study failed to meet the expected sample size of 20 patients per medical center. However, a total of 100 attempts were made, 69 surveys were collected and 67 were usable.

Results: Survey and Chart Review

There were thirty-six (36) males and thirty-three (33) females surveyed. While most respondents were between the ages of 40 and 80, three participants were under 30 and two were over 80. Figure 1 illustrates the ethnicity of the respondents. Other data includes when the participants were diagnosed and when their pain began. Table 1 illustrates this information.

Table 1.—Length of Time Participants Experienced Cancer and Pain			
When was your cancer diagnosed?		When did your pain begin?	
No. pts/%		No. pts/%	
a) in last week	3 (4.7%)	a) in last week	2 (3.3%)
b) in last month	5 (8%)	b) in the last month	7 (11%)
c) in last 6 mos	20 (30%)	c) in last six months .	25 (39%)
d) 6 - 12 mos. ago.....	9 (13%)	d) 6-12 months.....	12 (18%)
e) 1-2 years ago	5 (8%)	e) 1-2 years ago.....	0
f) 2-3 years ago	7 (11%)	f) 2-3 years ago.....	3 (4.7%)
g) 3-5 years ago.....	8 (12%)	g) 3-5 years ago.....	6 (9%)
h) >5 years ago.....	6 (9.5%)	h) >5 years ago.....	4 (6%)
*Four surveys were unanswered			

Participants were asked to fill out a survey that rated their experience with pain over the last week, the last twenty-four hours and at the time of the survey. Respondents diagnoses and the responses to the pain experience questions are illustrated in Figures 2, 3, 4 and 5. All but six of the participants were outpatients during the week prior to the survey. Twelve patients (17%) were receiving radiation therapy, 29 patients (43%) were receiving chemotherapy and 41 patients (39%) were receiving no active cancer treatment. Patients were also asked to rate any side effects of opioid analgesics that they might be experiencing such as nausea, constipation and/or drowsiness. Analog scales were used for all of the ratings (0=none; 10=worst possible). Table 2 illustrates the responses to these ques-

Table 2.—Respondents' Experience with Side Effects			
* Rating scale:	0-3	4-6	7-10
No. of patients			
Do you have a problem with constipation?.....	36	13	14
Do you have a problem with nausea?.....	45	11	9
Do you have a problem with drowsiness from your medications?.....	37	20	9
* 0-3=none to mild; 4-6=moderate; 7-10=severe			

Patients' knowledge and beliefs about cancer pain and its management were also assessed to see if they agree with current beliefs among health care professionals about cancer pain and its management. Participants were asked to respond using a 0-10 analog scale (0=disagree; 10=agree) to statements professionals generally believe to be true. The responses, showing patients' agreement or disagreement with these statements, are illustrated in Table 3.

Table 3.—Respondents' Knowledge and Beliefs Regarding Pain and Pain Control			
	Disagree 0 - 3	Unsure 4-7	Agree 8-10
Knowledge Statements			
Cancer pain can be relieved (7 unanswered)	1	21	37
Cancer pain medicines should be taken before pain becomes severe	8	9	49
It is alright to take more than one type of pain medicine	9	19	25
It is better to take pain medicine around the clock rather than only when needed. (3 unanswered)	16	18	19
Are you satisfied with the treatment you are receiving for pain (3 unanswered)	4	15	45

A concurrent chart review was performed for each respondent to look for the absence or presence of practices that adhere to established standards or guidelines. The chart review specifically looked for consistent use of a pain rating scale, consistent assessment, documentation and prescriptive practices during the time period of the survey, i.e., the twenty-four hours during which the survey was given to the patient to complete. Subjective descriptions of pain, such as, "I feel better today" or "patient states pain continues", were found in 41 respondents' charts. Objective descriptions, specifically analog pain ratings, were found in 50 of the charts reviewed (n = 67). As Figure 6 illustrates, assessment and documentation of pain ratings vary widely between disciplines and within the patient's record.

Table 4.—Number of Opioids/Adjuvants and Routes of Administration

Number of patients on one opioid	8
Number of patients on PCA	18
Number of patients with parenteral analgesics and oral opioids/adjuvants ordered	22
Number of patients with more than three routes ordered (IM, oral, transdermal, rectal, IV)	42
Number of patients with more than three medications from the same class ordered	17

Table 4 shows that many respondents had multiple medications ordered by multiple routes. This may have influenced patients' ability to name their medications. Only twenty-six (38%) of those surveyed could name one of the medications they were taking for pain. Eleven respondents (16%) could name two or more medications, however, the remaining patients stated that they could not name their pain medicines.

The responses to the experience and knowledge questions are of interest when coupled with the barriers to pain control that patients themselves identified (Figure 7). While it seems understood that insurance will cover all or most of the costs of hospitalization, it is obvious that patients were also thinking about barriers outside of the acute care setting, where outpatient medications, Patient Controlled Analgesia (PCA) or other therapies are not wholly or partially covered by insurance.

Patients also indicated that they use many alternatives to pharmaceutical pain control methods. Figure 8 illustrates that over half (53%) of those surveyed consider prayer an alternative therapy, while Healing Touch, relaxation, heat and imagery were used as well. One patient stated that he used marijuana and beer, another indicated that music helped and a third indicated that concurrent chemotherapy had relieved some of his pain. Thirty-seven respondents (55%) of those surveyed indicated that they would be willing to use alternatives, twenty-two (32%) respondents indicated they were undecided while only four (5.9%) stated "no" to this option.

When asked to identify health care team members, other than their physician or primary nurse, whom they felt were helpful in controlling their pain, 41% of those surveyed responded "none". Respondents from institutions with formal pain teams indicated that those teams had been helpful as indicated in Figure 9. Patients listed family, self, and friends in the "Other" category.

A nonparametric measure of association between variables, the Spearman rank-order correlation coefficients were computed for the experience (pain and side effect) questions and the knowledge statements. In general, there were significant positive correlations between some of the questions within each group. Only the statement "Cancer pain can be relieved" showed a significant positive correlation with patients' satisfaction with their current pain management ($r_s=0.55$, $p<.001$). There was a small but significant negative correlation between the amount of pain patients were experiencing at the time the survey and their satisfaction. ($r_s=0.29$, $p=0.02$).

A mean pain experience score was computed for each patient summing the responses to the questions "How much pain do you have right now?," "How much pain have you had over the last

twenty-four hours?" and "How much pain did you have in the last week?" and dividing by 3. Similarly a mean knowledge score was computed by dividing the sum of the responses to the knowledge questions by 4. There was a small, significant, negative Spearman correlation between the mean pain score and satisfaction ($r_s=0.34$, $p=0.007$) but no significant correlations between mean knowledge score and satisfaction or between the mean knowledge and experience scores.

Respondents were divided into two groups: those who indicated fear of addiction as a barrier to pain management and those who did not. The responses of the two groups were compared for knowledge, experience and satisfaction. The group that did not identify addiction as a barrier had a higher mean level of agreement with the knowledge questions than those who did. There was also a significant difference in satisfaction with pain management between the two groups ($\chi^2=15.13$, $df=9$, $p=0.040$). The difference between the mean responses to the experience questions was small. The non-parametric Mann-Whitney U (Wilcoxon Rank-Sum) test, which may be used to test whether two independent samples are drawn from the same population, was performed on the mean experience and knowledge scores of the two groups. A significant difference was found between the mean knowledge score of the two groups ($U=210.5$, $p=0.002$), but no statistically significant difference was found between the mean experience scores ($U=436.5$, $p=0.71$). This is consistent with the results of the analysis of the individual knowledge and experience questions.

Findings: Institutional Audit

Four of the institutions participating in the survey completed the institutional audit form, which identified the presence or absence of processes that support effective pain management. Of the four participating institutions, two have a formal pain team in place. All of the responding institutions have admission forms that screen for pain and all have a flow sheet of some kind for pain, although in one instance it is only if a patient is on a PCA. All of the hospitals have equianalgesic charts or other tools available for staff to use. None use caremaps or critical paths nor do they have a specific mechanism to signal ongoing or severe pain, such as incident reports.

Two of the four medical centers require new staff to have or to learn basic pain management principles as part of orientation. The two institutions with formalized pain management teams offer formal educational programs to patients and families and the opportunity for a formal interdisciplinary pain consultation. These institutions incorporate some assessment of patient satisfaction into continuous quality improvement methods. However, the policies that would trigger some type of professional response for unrelieved pain focuses only on patients using PCAs or other invasive techniques, not patients using oral analgesics or other modalities.

Two of the institutions stated that they were involved in ongoing research with regard to pain (not including this study), that costs are an important part of this research and that they have a hotline or consultation service available to outside resources.

Discussion and Recommendations

There were many reasons for conducting this multi-site investigation. Most cancer patients in Hawaii receive their primary and secondary care on Oahu where they may access a variety of different

agencies depending on physician privileges, bed availability and services needed. To date, there has been no aggregate data available to use to evaluate cancer pain management in Hawaii. This study is a starting point for assessing whether professional guidelines regarding pain and its management are being translated into practice.

As the chart review and institutional audit show, prescriptive practices, assessment and documentation vary between settings and practitioners. This is reflected in the fact that patients are not able to identify health care team members other than their physician and nurse as helpful with pain, except where a pain team was available. The majority of those surveyed were also unable to name the medications they were taking for pain. This may have been a phenomena of admission to a facility, where one expects professionals to take the responsibility for the knowledge and management of one's needs. However, the AHCPR and APS guidelines recommend that responsibility for pain management be assigned to "clinicians most knowledgeable, experienced, interested and able to respond to patients' needs in a timely fashion."^{2,6} The AHCPR and APS guidelines also state that patients be informed of the importance of their pain management, participate in their pain management plan of care and that pain be addressed in a collaborative and interdisciplinary manner. Therefore, a strong recommendation is made that institutions designate a person or team that will be responsible for educating patients and staff, as well as designing and evaluating programs that will ensure optimal pain management.

The findings of this study indicate that use of current cancer pain guidelines is inconsistent, as the data shows that patients had orders for multiple opioids and adjuvants in insufficient quantities or by multiple routes. Many participants had multiple medications prescribed from the same "step" of the WHO Analgesic Ladder, i.e., fentanyl patches, PCA and oral morphine. This may be a reflection of inconsistent assessment and feedback or that practitioners are hesitant to order opioids in a large enough dose to control pain. However, it may also be that multiple modalities, including radiation and chemotherapy, were necessary to control cancer pain, which by its evolving nature presents a challenge.

This may account for the fact that one-fourth of the patients surveyed were on IV PCA, one was on subcutaneous PCA and one on intrathecal morphine. This is an interesting finding when one considers that 90% of all patients surveyed were also on oral medications. While it is difficult to quantify the benefit of any given pain control regimen compared with pain relief, all of the current guidelines suggest using the oral route whenever possible with the subcutaneous route as the next alternative. Hospices have used this concept for years in the home setting, with 90% of all patients maintained on oral medications with a high degree of relief and satisfaction.^{16,17} It may be that PCA was being used to determine the appropriate oral dose or patients were being weaned off PCA to other routes. The data is insufficient to determine the reasons for using PCA, however, one questions whether the use of PCA in the hospital was necessary in every case.

Only two of the respondents were admitted solely for pain control so respondents' reports of severe pain in the week prior to the survey leads to many questions. Although 57% of those surveyed experienced pain beginning one to twelve months prior to the survey, the scope of this study could not examine how their pain was being managed during that time. One can only assume that there may be

inconsistencies between outpatient and inpatient pain management related to many variables, including access to services, such as home care or hospice, or reimbursement issues. Further studies are needed in Hawaii to determine how pain is being managed in the outpatient setting. The survey results do indicate that patients are concerned about costs, addiction and side effects and having enough medications "for later" should their pain become worse. The costs of pain management can be quite high, so respondents' anxiety about cost is appropriate, especially for patients on fixed incomes or whose illness may result in a loss of employee health insurance due to an inability to work. A patient in the hospital may have insurance coverage for multiple medications but if these same medications are prescribed on discharge, even the wholesale cost (without a pharmacy markup) can be prohibitive. The major determinants in prescribing pain medicines are a patient's condition, disease status, past pain/drug history, side effects and current response. If there is no physiologic basis for prescribing one drug over another, then costs, availability, cultural biases and other factors should be considered. Professional and community education is needed to extinguish fears of addiction and to increase knowledge about the variety of pain management routes, medications and resources that are available.

The use of PCA and the high incidence of polypharmacy may have influenced patients' responses to the statement "Cancer pain can be relieved." The responses indicate that although pain management experts believe cancer pain can be relieved, this belief is not shared by all of the respondents in this study. The AHCPR and APS guidelines propose that pain be assessed individually, with "relief" defined by the patient's ability to function, sleep, work and otherwise continue their activities of daily living. In other words, achieving a pain rating of "0" may not be the primary goal. One questions whether the inconsistent use of guidelines and apparent lack of participation by patients influenced their responses. Standardizing assessment tools and practices and using easily understood algorithms for prescribing would help clinicians and patients manage pain more effectively.

Anxiety about costs, fear of addiction and undesirable opiate side effects may also influence the responses that show many patients would opt to use alternatives. A mainland study showed patients made "425 million visits to unconventional providers compared with 338 million visits to primary care physicians."²¹ In Hawaii, there are many cultural practices that professionals view as questionable alternatives to Western medicine but that patients consider acceptable. Of interest is the finding that respondents consider prayer an alternative therapy. The impact of spirituality on pain and the use of nondrug interventions would make an interesting subject for further research, particularly in a multi-cultural environment. The use of cold, heat, relaxation, imagery, Healing Touch, distraction and massage may be widespread because they incorporate the "human touch" that contributes to patient satisfaction. Many of these therapies are free or cost no more than \$25, making them cost-effective and attractive to patients. More studies are needed to determine how these therapies can be incorporated into existing health care delivery systems and their impact on the overall cost of pain management.

The factor that was most often identified as interfering with pain control was "having to wait too long for medications." This first relates directly to nursing practices as well as patient education.

Figure 1.—Ethnicity of Respondents

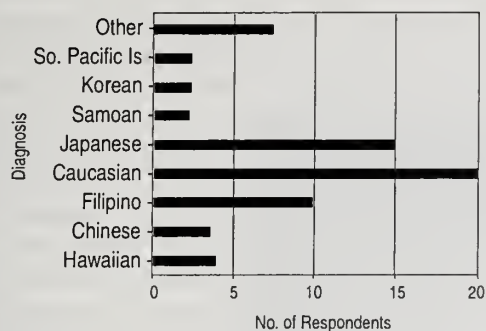


Figure 4.—Pain Experience in 24 Hours Prior to Study

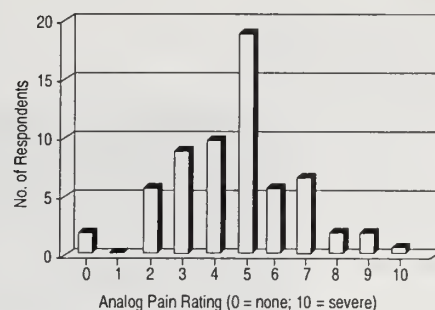


Figure 2.—Respondents by Diagnosis

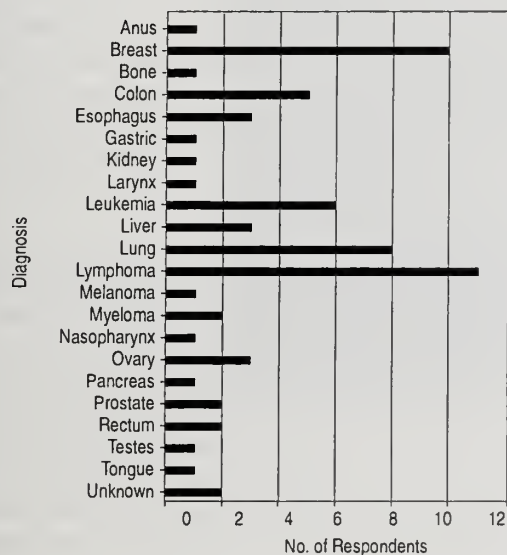


Figure 5.—Patients' Pain Experience at Time of Survey

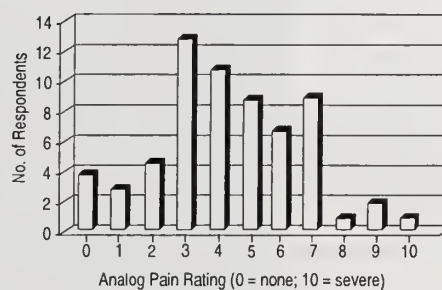


Figure 3.—Patients' Pain Experience in Week Prior to Study

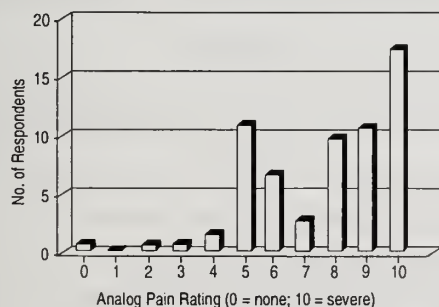


Figure 6.—Documentation of Pain Assessments

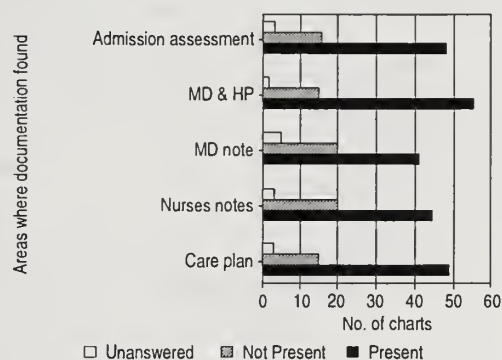


Figure 7.—Patient-Identified Barriers to Pain Control

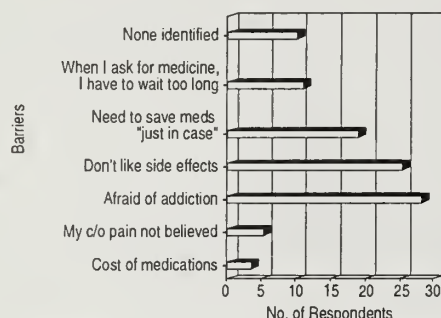


Figure 8.—Alternate Pain Relief Therapies Patients Are Using

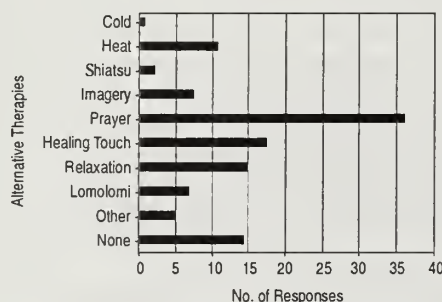
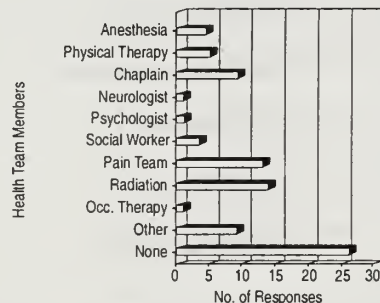


Figure 9.—Healthcare Team Members Identified as Helpful With Pain control



While patients remain on PRN medications, they will still have to ask for their medications. They may also be reluctant to "bother the nurse" or may be uneducated about the need to ask for medication before the pain escalates. This complaint may also be the reason for the use of a PCA pump. One study affirms that the average time it takes for a nurse to deliver an analgesic, including documentation, is 18.42 minutes while others show a waiting time of up to 30 minutes.⁸ This may be due to variables such as staffing shortages that mean a patient's call light is not answered in a timely manner. While this seems to be a minor problem, it

does show that ongoing institutional and professional assessment is necessary to define a standard of practice with regard to pain management.

It appears that some of the guidelines are used part of the time in various ways. While this study cannot show the reasons for inconsistent use of the guidelines, the data does support the fact that there needs to be standardization and further research in a number of areas. The Hawaii Cancer Pain Initiative strongly recommends devising a standardized pain assessment tool and flow sheet that will be used by all medical centers and outpatient agencies. Adopting algorithms that utilize methods of determining efficacy and cost-effectiveness for use when prescribing medications should be considered for use along with the WHO analgesic ladder. All institutions providing inpatient care to cancer patients should have a pain management team or service. If this is outside the resource capability of the agency, then a mechanism for referring to or accessing a pain management resource should be defined. Basic pain management education should be required for graduation from Hawaii's nursing and medical schools. Acute medical centers providing care to oncology patients should mandate competency in cancer pain management for all clinicians working in this area. Recognizing that patients themselves often present many barriers to pain control, research into the educational needs of the Island's various cultural groups, especially validating the use of pain rating tools in other languages, may define culture-specific barriers to pain management. A study comparing outpatient pain management to this inpatient study is needed to provide important information about the needs of cancer patients across the continuum of care. As with any endeavor, these recommendations will require ongoing energy, interaction and commitment from individuals and institutions alike but the benefit to our Island community will be worth the effort.

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An Assessment of Hawaii QUEST Medical Plans Performance Using Medicaid HEDIS Measures, 1996-1997

Lynette Honbo MD* and Matthew Loke PhD*

MEDICAID HEDIS Quality of Care Performance Measurements

What is Medicaid HEDIS?

HEDIS (Health Plan Employer Data and Information Set) is the performance measurement system for health plans developed by the National Committee for Quality Assurance (NCQA). The NCQA is an organization which accredits health plans as well as other types of health care organizations. The number of NCQA accredited managed care plans now exceeds 330, covering three quarters of all HMO enrollees or roughly 45 million Americans. HEDIS data is collected by more than 90 percent of all health plans. *Medicaid HEDIS* is an adaptation of *HEDIS 2.0/2.5* for use by health plans with Medicaid managed care programs. In 1997, *Medicaid HEDIS* was incorporated into *HEDIS 3.0*. Therefore, QUEST plans will report their HEDIS data for the 1998 fiscal year in *HEDIS 3.0* format.

What is measured in Medicaid HEDIS?

Health plan performance related to the following seven (7) areas is measured:

- Membership;
- Utilization;
- Quality of Care;
- Access to Care;
- General Plan Management;
- Financial Performance; and
- Satisfaction with Care.

Health plan performance for membership, utilization, quality of care, and access measures are reported as tables. Membership and utilization measures relate to all members. Generally, quality of care measures apply to members continuously enrolled for 12 months with a maximum lapse in coverage of 30 days. Access to care measurements relate to the availability of services. Most general plan management measures require health plans to describe specific services.

What measures are the QUEST plans required to report?

The QUEST medical plans are required to report measures related to membership, utilization, quality of care, access to care, and general plan management. Since all QUEST plans are required to submit financial statements, and an annual customer satisfaction survey is performed by the Med-QUEST Division (MQD), plans are not required to report financial performance and satisfaction with care as part of their *Medicaid HEDIS* report.

Why is the DHS requiring QUEST plans to report Medicaid HEDIS data?

Medicaid HEDIS has standardized data collecting and reporting requirements and its measures are clearly defined. It allows the evaluation of a plan's performance over time, identification of areas which should be improved, quantitative measurement of strategies a plan uses to improve outcomes, and comparison of similar elements across plans.

What should be considered in reviewing the QUEST Medicaid HEDIS report?

The data presented is an aggregate of data submitted by individual QUEST medical plans. Since *Medicaid HEDIS* specifications allow for data collection using various specified methodologies, the QUEST plans may select alternative methodologies to report the same measure. Therefore, differences in data sources and data collecting methodologies may affect the validity of the aggregate data presented. Additionally, while the QUEST plans reviewed their individual reports and verified the data prior to submission, the Department does not audit each plan's data (NCQA does not require it either). However, the Department executes a protocol to examine the contents for accuracy and consistency.

Medicaid HEDIS specifications require 12 continuous months of enrollment with one lapse in coverage not to exceed 30 days for most of the quality of care measures. Therefore, the quality of care measures do not reflect the experience of a plan's total membership, only that of members who met the definition of "continuously enrolled."

Medicaid HEDIS cautions that data from health plans with "small numbers" for a measure may be of questionable statistical validity.

What are the Medicaid HEDIS measures being reported?

The QUEST plans reported a total of 37 mandatory measures. The collection of these measures is available from the Med-QUEST Division. This report will focus on the following twelve (12)

*Department of Human Services
Med-QUEST Division
Medial Standards Branch and
Health Care Management Branch
Acknowledgement: We thank Alan Matsunami
for helpful comments

Teenagers.
Parent problems. Math problems.

ACNE Problems



Give them one less thing to worry about.

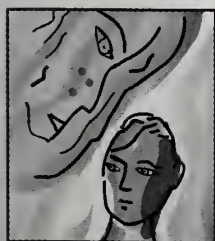
First Line Therapy with Dual Action Synergy

"[Benzamycin Gel] ... produced a significantly better response in therapy of moderate acne than did either component alone."¹

B.I.D. Dosing

Adverse reactions infrequently reported include dryness, erythema and pruritus.

Benzamycin has not been tested in children under the age of 12.



BENZAMYCIN[®] Topical Gel
(3% erythromycin, 5% benzoyl peroxide)

Available in
46.6g size

First Line Therapy for Moderate Inflammatory Acne
visit our website <http://www.dermik.com>

Benzamycin®

(erythromycin-benzoyl peroxide topical gel)

Topical gel: erythromycin (3%), benzoyl peroxide (5%)

For Dermatological Use Only - Not for Ophthalmic Use.

Reconstitute Before Dispensing

Brief Summary: See full prescribing information for complete product information

INDICATIONS AND USAGE

BENZAMYCIN® Topical Gel is indicated for the topical treatment of acne vulgaris

CONTRAINDICATIONS

BENZAMYCIN® Topical Gel is contraindicated in those individuals who have shown hypersensitivity to any of its components.

WARNINGS

Pseudomembranous colitis has been reported with nearly all antibacterial agents, including erythromycin, and may range in severity from mild to life-threatening. Therefore, it is important to consider this diagnosis in patients who present with diarrhea subsequent to the administration of antibacterial agents.

Treatment with antibacterial agents alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of "antibiotic-associated colitis."

After the diagnosis of pseudomembranous colitis has been established, therapeutic measures should be initiated. Mild cases of pseudomembranous colitis usually respond to drug discontinuation alone. In moderate to severe cases, consideration should be given to management with fluids and electrolytes, protein supplementation and treatment with an antibacterial drug clinically effective against *C. difficile* colitis.

PRECAUTIONS

General: For topical use only; not for ophthalmic use. Concomitant topical acne therapy should be used with caution because a possible cumulative irritancy effect may occur, especially with the use of peeling, desquamating or abrasive agents. If severe irritation develops, discontinue use and institute appropriate therapy.

The use of antibiotic agents may be associated with the overgrowth of nonsusceptible organisms including fungi. If this occurs, discontinue use and take appropriate measures.

Avoid contact with eyes and all mucous membranes.

Information for Patients: Patients using BENZAMYCIN® Topical Gel should receive the following information and instructions

1. This medication is to be used as directed by the physician. It is for external use only. Avoid contact with the eyes, nose, mouth, and all mucous membranes

2. This medication should not be used for any disorder other than that for which it was prescribed.

3. Patients should not use any other topical acne preparation unless otherwise directed by physician.

4. Patients should report to their physician any signs of local adverse reactions

5. BENZAMYCIN® Topical Gel may bleach hair or colored fabric

6. Keep product refrigerated and discard after 3 months

CARCINOGENESIS, MUTAGENESIS AND IMPAIRMENT OF FERTILITY

Data from a study using mice known to be highly susceptible to cancer suggests that benzoyl peroxide acts as a tumor promoter. The clinical significance of this is unknown.

No animal studies have been performed to evaluate the carcinogenic and mutagenic potential or effects on fertility of topical erythromycin. However, long-term (2-year) oral studies in rats with erythromycin ethylsuccinate and erythromycin base did not provide evidence of tumorigenicity. There was no apparent effect on male or female fertility in rats fed erythromycin (base) at levels up to 0.25% of diet.

Pregnancy: Teratogenic Effects: Pregnancy CATEGORY C: Animal reproduction studies have not been conducted with BENZAMYCIN® Topical Gel or benzoyl peroxide

There was no evidence of teratogenicity or any other adverse effect on reproduction in female rats fed erythromycin base (up to 0.25% diet) prior to and during mating, during gestation and through weaning of two successive litters.

There are no well-controlled trials in pregnant women with BENZAMYCIN® Topical Gel. It also is not known whether BENZAMYCIN® Topical Gel can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity.

BENZAMYCIN® Topical Gel should be given to a pregnant woman only if clearly needed

Nursing Women: It is not known whether BENZAMYCIN® Topical Gel is excreted in human milk after topical application.

However, erythromycin is excreted in human milk following oral and parenteral erythromycin administration. Therefore, caution should be exercised when erythromycin is administered to a nursing woman.

Pediatric Use: Safety and effectiveness of this product in pediatric patients below the age of 12 have not been established

ADVERSE REACTIONS

In controlled clinical trials, the total incidence of adverse reactions associated with the use of BENZAMYCIN® Topical Gel was approximately 3%. These were dryness and irritation.

The following additional local adverse reactions have been reported occasionally: irritation of the skin including peeling, itching, burning sensation, erythema, inflammation of the face, eyes and nose, and irritation of the eyes. Skin discoloration, oiliness and tenderness of the skin have also been reported

DOSAGE AND ADMINISTRATION

BENZAMYCIN® Topical Gel should be applied twice daily, morning and evening, or as directed by a physician, to affected areas after the skin is thoroughly washed, rinsed with warm water and gently patted dry

How Supplied and Compounding Directions:

Size (Net Weight)	NDC 0066	Benzoyl Peroxide Gel	Active Erythromycin Powder (in Plastic Vial)	Ethyl Alcohol (70%) To Be Added
11.65 grams (as dispensed)	0510-05	10 grams	0.4 grams	1.5 mL
SAMPLE				
23.3 grams (as dispensed)	0510-23	20 grams	0.8 grams	3 mL
46.6 grams (as dispensed)	0510-46	40 grams	1.6 grams	6 mL

Prior to dispensing, tap vial until powder flows freely. Add indicated amount of ethyl alcohol (70%) to vial (to the mark) and immediately shake to completely dissolve erythromycin. Add this solution to gel and stir until homogeneous in appearance (1 to 1-1/2 minutes). BENZAMYCIN® Topical Gel should then be stored under refrigeration. Do not freeze. Place a 3-month expiration date on the label

NOTE: Prior to reconstitution, store at room temperature between 15° and 30°C (59° - 86°F).

After reconstitution, store under refrigeration between 2° and 8°C (36° - 46°F).

Do not freeze. Keep tightly closed. Keep out of the reach of children

Caution: Federal (U.S.A.) law prohibits dispensing without prescription

U.S. Patent Nos. 4,387,107 and 4,497,794

Manufactured by Rhône-Poulenc Rorer Puerto Rico Inc. • Manati, Puerto Rico

For: DERMIK LABORATORIES, INC.

A Rhône-Poulenc Rorer Company • Collegeville, PA 19426

Rev. 2/96

IN-7121P

References:

1. Shalita AR et al. A Multicenter, Double-Blind Study of the Combination of Erythromycin/Benzoyl Peroxide, Erythromycin Alone, and Benzoyl Peroxide Alone in the Treatment of Acne Vulgaris. *Cutis* 1992;49:1-4



BZM0198PED1

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measures which are key to assessing QUEST's performance in providing quality care:

- Membership by Age and Sex;
- Childhood Immunization;
- Cervical Cancer Screening;
- Cesarean Section;
- Diabetic Retinal Exam;
- Inpatient Acute Hospital Care;
- Emergency Room Visits;
- Live Births;
- Mental Health and Chemical Dependency Services;
- Outpatient Drug Utilization;
- Low Birthweight; and
- Care Access: Utilization of Primary Care Providers by Children.

In addition, a description of how managed care is being provided by the QUEST medical plans is presented. The description includes four key programs in the delivery of managed care services:

- Case Management;
- Utilization Management;
- New Member Orientation/Education; and
- Standards for Waiting Times.

Overall, this report focuses primarily on data submitted by QUEST medical plans for fiscal 1997. However, *Medicaid HEDIS* data for fiscal 1996 is included, when available, to note changes in QUEST performance over time. HEDIS measures were reported in fiscal 1995 but have been excluded for comparison in most instances due to the following reasons:

- QUEST began on August 1, 1994. Therefore, fiscal 1995 for QUEST was only 11 months in duration;
- In the initial months of QUEST, there were many plan changes and significant confusion among providers as to which plan should be receiving and reporting a patient's encounter data;
- *Medicaid HEDIS* measures were not available. Hence, the plans reported a combination of *HEDIS 2.0/2.5* and specific state measures, which in many cases, were not directly comparable with *Medicaid HEDIS* measures.

Membership by Age and Sex

Why is this important?

This measure answers general questions about the people who are receiving their health care services through QUEST.

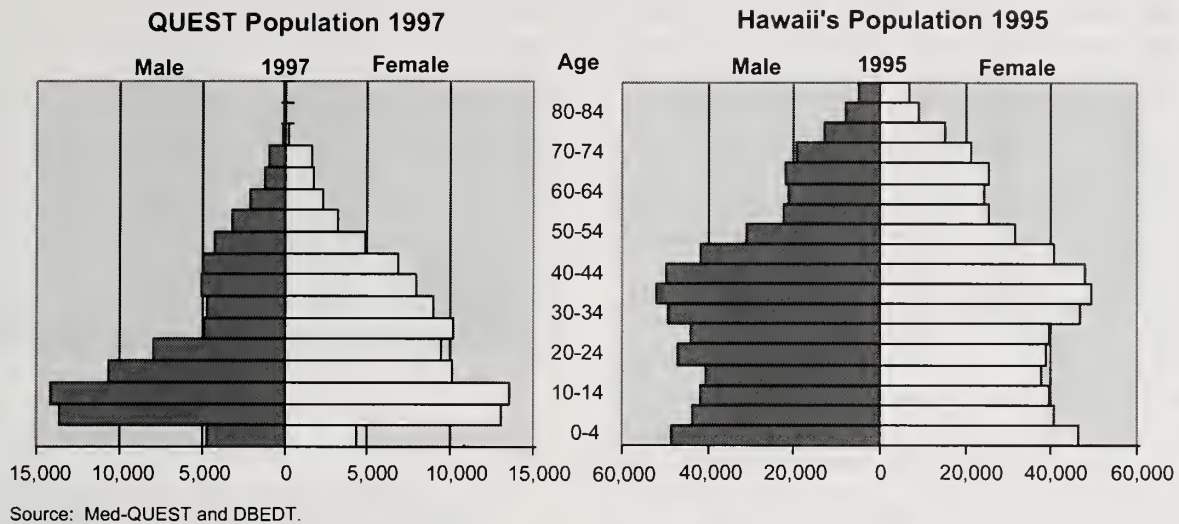
What was measured?

The total number of unduplicated QUEST enrollees by age and sex, enrolled during any part of the report year from July 1, 1996 to June 30, 1997 was recorded.

How did QUEST perform?

Enrollment in QUEST decreased from an average monthly membership of 155,420 in fiscal 1996 to 134,830 in fiscal 1997. The QUEST population in fiscal 1997 was also younger. The mean age of QUEST members dropped to 20.1 years in fiscal 1997 from 21.3 years in fiscal 1996. QUEST members remain predominantly children and adult females. Approximately 56 percent of total membership were children under 20 years of age.

Chart 1



The age and sex distribution of a population for a given fiscal year can be summarized graphically by a “population pyramid.” A population pyramid displays the distribution of male and female members in different age-groups. Chart 1 shows QUEST’s population structure in fiscal 1997, as compared to Hawaii’s resident population in 1995. The QUEST population displays a skewed, classic “pyramid”, with a large proportion of younger people, fewer middle-aged people, and far fewer elderly people. There is also a disproportionate number of middle-aged women.

In contrast, the Hawaii resident population structure resembled a bulging “pillar.” This is a more mature population, with proportionately fewer young people (ages 0-24) contributing to the total. The middle-aged group (ages 25-54) is the dominant segment of this population structure while the near-elderly (ages 55-64) and elderly (ages 65 and over) appear rather significant before tapering off. The average age of Hawaii’s resident population in 1995 was 34.5 years of age. Additionally, there were 102 males per 100 females in the same population. In comparison, there were only 95.6 males per 100 females in the QUEST population in fiscal 1997.

Childhood Immunization

Why is this important?

Immunization in the first two years of life is accepted as one of the most effective public health measures in preventing serious illnesses such as whooping cough, polio, measles, and hepatitis B. Unfortunately, studies have shown that low-income children are less likely to receive timely and adequate immunizations. In 1990, the Centers for Disease Control (CDC) reported that less than 50% of low-income inner city children were fully immunized by age two.

What was measured?

The childhood immunization rate is the percentage of QUEST two-year olds who were enrolled in one plan for 12 months, and who had received appropriate immunizations by their second birthdays (A break in enrollment not to exceed 30 days was allowed).

How did QUEST perform?

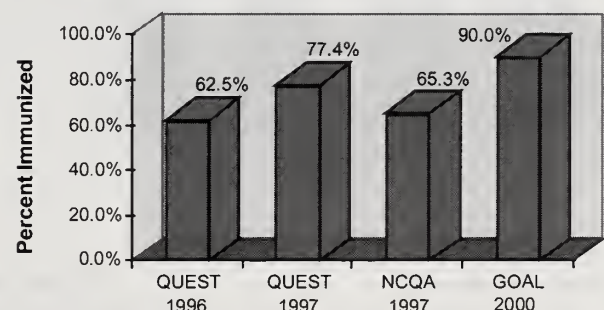
QUEST did very well compared to the previous fiscal year and to

rates reported in other studies. The Childhood Immunization Rate improved to 77.4 percent in fiscal 1997 from 62.5% in fiscal 1996. At this rate of improvement, QUEST should realize the “Healthy People 2000” goal of 90 percent Childhood Immunization Rate.

Recently, the NCQA released its first annual report on HEDIS measures, “The State of Managed Care Quality.” This report collected information, voluntarily submitted by over 330 health plans throughout the United States, which participated in the NCQA’s accreditation program. The NCQA reported that the national average rate of children who had received 4 DTP/DTaP (diphtheria-tetanus-pertussis), 3 polio (OPV/IPV), 1 MMR (measles-mumps-rubella), 1 Hib (H influenza type b), and 2 HepB (Hepatitis B) was 65.3% for the health plans which submitted data. Retrospective studies done in Hawaii on children entering kindergarten have shown that between 58-63% received the basic series by age 2.

Chart 2

Childhood Immunization Rates



Source: Med-QUEST and NCQA.

Cervical Cancer Screening

Why is this important?

Nationally, more than 13,000 new cases of cervical cancer are diagnosed each year, and 4,800 women die of the disease annually.

Additionally, the rate of cervical cancer is typically higher among poor women and they are more likely to be diagnosed when the cancer is in advanced stages. Fortunately, cervical cancer is curable if detected early by regular check-ups and the use of the Papanicolaou (Pap) smear test. Thus, for Medicaid women, cervical cancer screening is very important and saves lives.

What was measured?

The cervical cancer screening rate is the percentage of women aged 16 to 64, enrolled in a medical plan for 12 months, who had at least one Pap smear during the past three years.

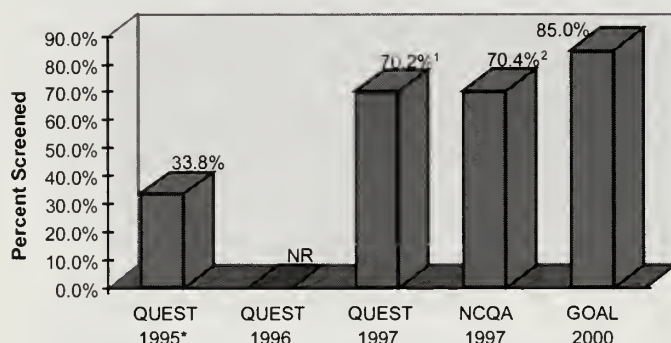
How did QUEST perform?

The QUEST medical plans did not report this measure in fiscal 1996. In fiscal 1995, the reported rate was 33.8 percent. This rate was for the first eleven (11) months of QUEST program and was reported by four (4) of the five (5) plans. Another shortcoming of the 1995 QUEST data was the plans did not have three years worth of data as required by the measure.

In fiscal 1997, the QUEST screening rate reported was 70.2 percent (women aged 16 to 64). This screening rate is compatible with a recently released NCQA study which reported a 70.4 percent national average for women aged 21 to 64 in participating health plans. The "Healthy People 2000" goal is to have 85 percent of all women receive a Pap smear every one to three years.

Chart 3

Cervical Cancer Screening Rates



*Rate for 11 months and reported by 4 out of 5 QUEST plans.

¹ Women aged 16-64 years.

² Women aged 21-64 years.

NR: Not Reported.

Source: Med-QUEST and NCQA.

Cesarean Section

Why is this important?

Cesarean (C)-sections are among the most frequent surgical procedures performed in the United States and both mother and neonate have a greater chance of complications than with vaginal birth. A C-section is normally unnecessary if vaginal delivery of the baby does not pose a serious health risk to the infant or mother. Hospital and physician services associated with C-section deliveries are more costly than vaginal deliveries. Therefore, the rate of C-section deliveries is an indicator of appropriate clinical management and quality of care.

What was measured?

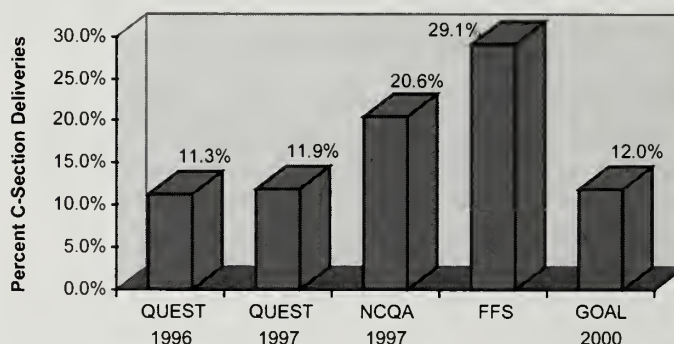
The C-section rate is the percentage of total QUEST deliveries resulting in live newborns which were C-section delivered in fiscal 1997.

How did QUEST perform?

The QUEST plans performed very well in this measure. In fiscal 1996 and fiscal 1997, the QUEST C-section rates were essentially unchanged at about 11 percent (see Chart 4). This rate is far lower than the NCQA's national average of 20.6 percent, and the national fee-for-service (FFS) rate of 29.1 percent. QUEST's fiscal 1996 and fiscal 1997 rates have actually exceeded the national health's established C-section rate of 12-15 percent by the year 2000.

Chart 4

Cesarean Section Rates



Source: Med-QUEST and NCQA.

Diabetic Retinal Exam

Why is this important?

Diabetes mellitus affects about 6.5 percent of Hawaii's population, and it is the leading cause of severe eye damage and adult blindness in the United States. However, blindness can be prevented if retinal changes are detected early, and treated appropriately with laser. Therefore, early intervention through effective screening is crucial in preserving the eye sight of individuals with diabetes.

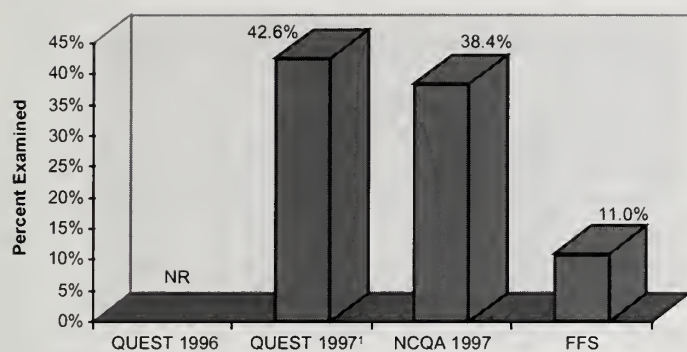
What was measured?

This was an optional measure for QUEST plans. However, two of the larger medical plans submitted data on this measure for fiscal 1997. The diabetic eye exam rate is the percentage of plan members with diabetes aged 31 to 64 years who received an ophthalmoscopic eye exam in fiscal 1997. Members in the plan must be enrolled continuously during the reporting period (allowing for one break in service, not to exceed 30 days).

How did QUEST perform?

In this measure, QUEST out-performed both the NCQA's national average and FFS rates (see Chart 5). The QUEST rate of 42.6 percent in fiscal 1997 indicates that the QUEST performance compares favorably with that of managed care in the private sector. QUEST plans did not report this measure in fiscal 1996.

Chart 5
Diabetic Retinal Exam



¹Optional Measure: Two primary plans reporting.
NR: Not Reported.

Source: Med-QUEST and NCQA.

Inpatient Acute Hospital Care

Why is this important?

Inpatient acute hospital care is one of the most costly expenses of a health plan. It is a measure of a plan's performance in managing patient care.

What was measured?

The total number of QUEST enrollees who received inpatient hospital care and the category of care they received (medical/surgical; maternity; and newborns) by age were measured. The total number of hospital days, days by category of care, and the average length of stay (ALOS) were also reported.

How did QUEST perform?

Compared with the previous fiscal year, there were fewer total days and fewer inpatient discharges. This was consistent with the decrease in enrollment. However, the total ALOS and the ALOS for each category of care remained essentially the same (see Chart 6). The QUEST ALOS for total acute inpatients was 3.3 days in fiscal 1997. In contrast, the latest available statewide and national ALOS reported by the Healthcare Association of Hawaii for acute care hospitals in 1995 were 6.5 days and 5.7 days respectively.

Emergency Room Visits

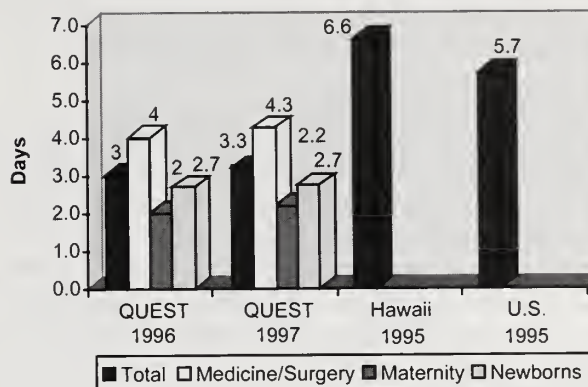
Why is this important?

The emergency room rate is a critical measure of appropriate utilization of health care because a visit to the emergency room is largely member initiated, and emergency room costs for non-emergency care are much higher than visits to PCPs. Historically, the higher emergency room utilization of Medicaid populations compared with the general public has been attributed to the inadequate access by Medicaid enrollees to other primary care options. By providing education to patients so that they will utilize emergency room services more appropriately and by improving access to primary care, managed care plans should be able to bring down emergency room rates.

What was measured?

This HEDIS measurement reports the total number of QUEST emergency room visits which did not result in inpatient stays. Each

Chart 6
Inpatient Average Length of Stay



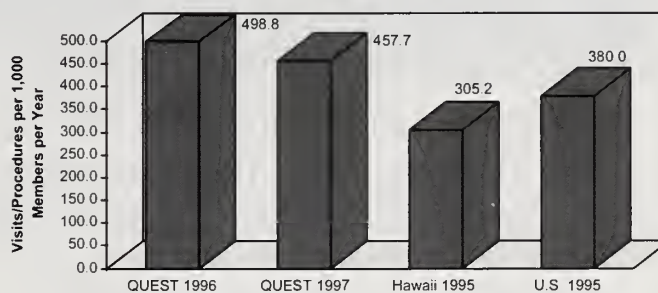
Source: Med-QUEST.

visit is counted once, regardless of the intensity of care required or the length of time spent.

How did QUEST perform?

Compared with the previous fiscal year, QUEST showed improvement. The total number of emergency room visits and the rate of emergency room utilization had both decreased. In fiscal 1997, the QUEST emergency room rate was 457.7 per 1,000 members. This rate is higher than the last available 1995 rates of 305.2 per 1,000 population statewide and the national rate of 380 per 1,000 population. We believe the emergency room rate for QUEST will decrease further in future as QUEST members become better educated on appropriate use of emergency room services and how to better access services through PCPs.

Chart 7
Emergency Room Visits



Source: Med-QUEST and AARP.

Live Births

Why is this important?

Medicaid has traditionally been a major payer for deliveries and newborn care. In the late 1980s, the federal government encouraged states to expand income eligibility for pregnant women and newborns because of studies which demonstrated savings of at least \$3 in direct care for each dollar spent on care given to pregnant women. Thus, this HEDIS measure is important because it enumerates the deliveries covered by QUEST and the general health of the newborns after delivery.

What was measured?

The total number of live births (including separate counts of well newborns and complex newborns), the number of inpatient hospital days, and the average length of stay for women of different ages were reported.

How did QUEST perform?

The total number of QUEST deliveries resulting in live births decreased from 4,916 in fiscal 1996 to 4,065 in fiscal 1997. However, the average length of hospital stays for well newborns increased slightly from 1.44 days to 1.74 days, while that for complex cases decreased from 16.46 days to 15.46 days. We feel that the decrease in births can be explained by the decrease in QUEST enrollment. The increase in average length of stay for well newborns is consistent with the QUEST policy of allowing physicians and families to determine how long a healthy newborn and mother should remain in hospital.

Mental Health and Chemical Dependency Services

Why is this important?

Utilization of mental health and chemical dependency services is important because it is an indirect measure of a QUEST member's ability to access these services. Beyond that, it measures the adequacy of the provider network established by a QUEST plan to provide appropriate mental health and chemical dependency services.

What was measured?

The utilization of mental health/chemical dependency services by age and sex was measured. The services are grouped into the following general categories—(1) members receiving any service; (2) inpatient hospital services; (3) day/night services, and (4) ambulatory services.

How did QUEST perform?

The actual number of mental health services provided decreased 9.6 percent between fiscal 1996 and fiscal 1997. Chart 8 shows the decrease was less significant as a percentage of members receiving services across the different categories of services. This is consistent with the decrease in overall QUEST enrollment count of six (6) percent. For chemical dependency services, the actual number of services dropped four (4) percent but the percentage of members who had received these services by different categories remained essentially unchanged.

In addition to the decrease in QUEST membership, the following factors should be considered in evaluating the decline in actual number of mental health and chemical dependency services:

- The benefit package for mental health and chemical dependency services was unlimited for the first eight (8) months of fiscal 1996 but limited to 30 inpatient hospital days and 24 hours of outpatient services in fiscal 1997;
- One QUEST plan reported encounters for 11 months instead of 12 months for fiscal 1997, thus the actual number of services provided should be higher;

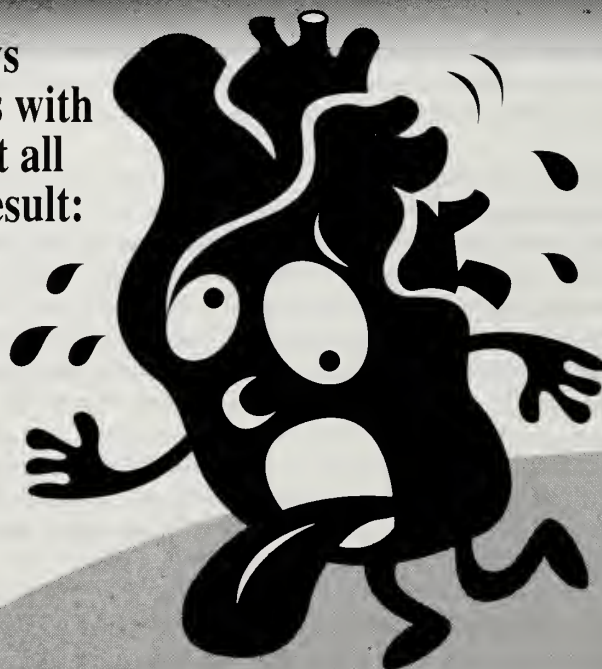
Congestive Heart Failure

American Heart AssociationSM
Fighting Heart Disease
and Stroke



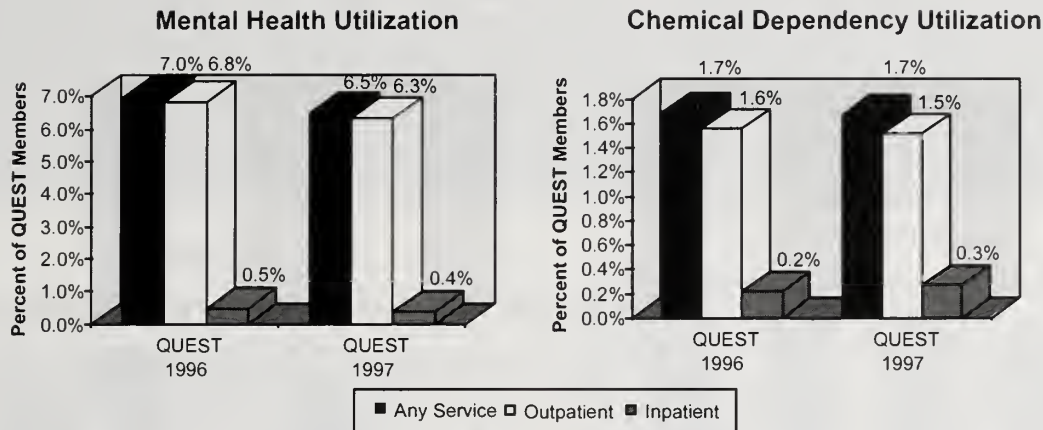
The American Heart Association says congestive heart failure (CHF) starts with the inability of the heart to pump out all of the blood that returns to it. The result:

- CHF is the most frequent cause of hospitalization for people 65 and older
- 50% of CHF patients die within 5 years of diagnosis
- From 1979 to 1993, CHF deaths increased almost 110 percent



©1997, American Heart Association

Chart 8



Source: Med-QUEST.

- The processing of enrollment into the behavioral managed care plan for the seriously mentally ill (SMI) adults improved. Therefore, mental health services used by QUEST members in most need of mental health services were not being provided and reported by the QUEST plans. Instead, these services were being provided by the QUEST behavioral managed care plan for SMI adults.

Outpatient Drug Utilization

Why is this important?

This measure assists health plans and the Department to assess how cost effective the QUEST drug benefit is being administered.

What is being measured?

The total cost of prescription drugs, the average cost per member per month, the total number of prescriptions filled, and the average number of prescriptions filled per year for QUEST members of different ages are measured.

How did QUEST perform?

The total costs of QUEST drug benefits decreased by more than \$6 million in fiscal 1997 compared with fiscal 1996. Cost per member per month decreased by 13.6 percent from \$13.92 to \$12.03. The total number and average number of prescriptions filled also decreased. Studies have shown that decreases in drug benefits, if done inappropriately, may be accompanied by increases in emergency room visits, mental health services, and inpatient hospital utilization. This did not happen in the QUEST program and thus, we feel the decreases in the drug benefit did not affect access to care, nor did it promote overutilization of more costly care. The inference is that the imposition of managed care provided needed control on drug utilization without denying access.

Low Birthweight

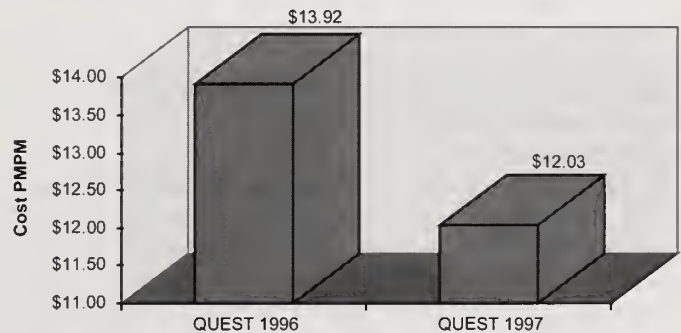
Why is this important?

In the United States, 263,000 low birthweight infants (weight less than 2,500 grams) are born annually. Low birthweight infants face higher risk for chronic and permanent disabilities, serious medical

complications and illnesses, and death in infancy. Low-income women are typically at higher risk for having low birthweight infants. There are many factors which increase a woman's risk of having a low birthweight infant. Some of the more common factors

Chart 9

Outpatient Drug Utilization



Source: Med-QUEST.

include smoking, poor nutrition, and chronic medical conditions. It is widely felt by the medical profession that the incidence of low birthweight can be decreased by improving access to appropriate prenatal care.

What was measured?

The percentage of low birthweight (less than 2,500 grams) infants born during the fiscal year was measured using hospital discharge data or birth certificate data.

How did QUEST perform?

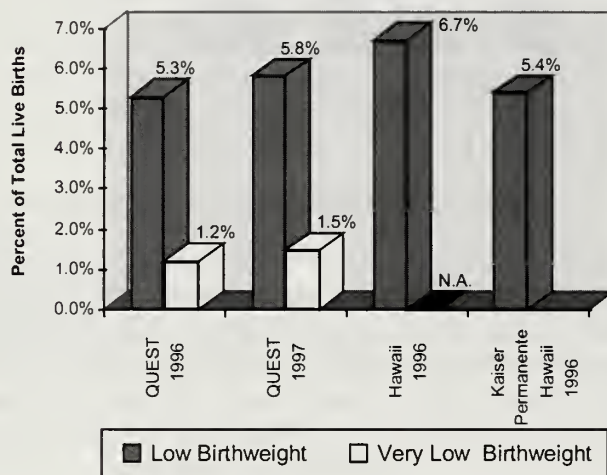
Although the number of low birthweight babies crept up slightly from fiscal 1996 to fiscal 1997, the QUEST rate is still very good and do not indicate that QUEST pregnant women have a higher rate of low birthweight infants compared to their peers in the state. Chart 10 shows that QUEST's low birthweight rate of 5.8 percent in fiscal 1997 is lower than the overall state's rate of 6.7 percent in 1996. We

believe QUEST is doing well in this measure and will continue to do so in the future with better monitoring and pre-natal care for members.

The QUEST low birthweight rate of 5.3% in fiscal 1996 was actually better than Kaiser Permanente Hawaii's commercial plan rate of 5.4 percent¹ in calendar year 1996.

Kaiser Permanente Hawaii is ranked as one of the best managed care plans in the United States.

Chart 10
Low Birthweight Babies



Source: Med-QUEST & DOH.

Care Access: Utilization of Primary Care Providers by Children

Why is this important?

Traditionally, under the fee-for-service Medicaid Program, access to non-emergency care was difficult to obtain. One of the primary reasons Hawaii turned to managed care was to improve access to non-urgent, preventive care. By requiring that each QUEST member have his/her own primary care provider (PCP), the State felt that access to medical care and the general health of Medicaid recipients would be improved. Children comprise about 56 percent of total QUEST membership. Therefore, children's utilization of primary care services through PCPs is an important measure of access.

What was measured?

The rates of utilization of primary care providers by children are the rates of QUEST children enrolled in one plan for 12 months by the following age categories:

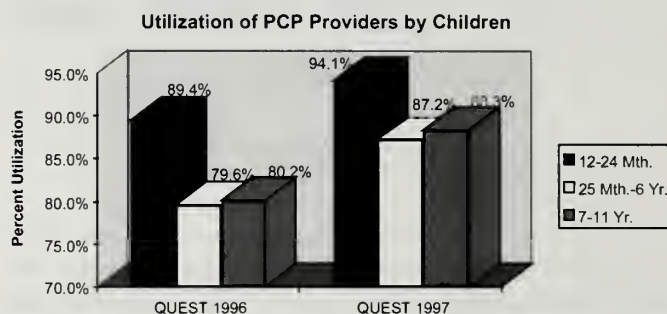
- children aged 12 to 24 months who had at least one visit to a primary care provider (PCP) during the past 12 months;
- children 25 months to 6 years who had at least one visit to a primary care provider (PCP) during the past 12 months; and
- children aged 7 years to 11 years, enrolled in one plan for two years, who had at least one visit to a PCP in the past 12 to 24 months.

¹See Kaiser Permanente Hawaii's 1997 Quality Report (page 11). Kaiser Permanente Hawaii recently received a four-star rating, and was ranked as the sixth best plan in the U.S. News & World Report's annual appraisal of "America's Top HMOs."

How did QUEST perform?

In fiscal 1997, the utilization of PCPs by QUEST children continued to improve. In fiscal 1996, QUEST's rates for the different age categories exceeded 80 percent. The average utilization rate for all three age categories was about 83 percent (see Chart 11). In fiscal 1997, rates for the different age categories jumped to the high 80s and the average utilization for all three age groups jumped to 90 percent. The inference here is that QUEST children have excellent access to their PCPs.

Chart 11



Source: Med-QUEST.

Managed Care in Hawaii QUEST

In fiscal 1997, QUEST eligible persons were able to choose from five (5) QUEST medical plans. These QUEST plans are unique with five (5) different approaches to the delivery of medical care and five (5) different structures and organizational experiences. A summary description of the QUEST medical plans is as follows:

- **AlohaCare** is a plan formed by community health centers, and QUEST is its single line of business;
- **HMSA-QUEST** is a plan by a local, non-profit, mutual benefit society associated with Blue Cross/Blue Shield — with many commercial lines of business;
- **Kaiser Permanente QUEST** is a plan by a large, nationally affiliated, non-profit Health Maintenance Organization (HMO);
- **Queen's Hawaii Care** is a plan by a local, non-profit health care system; and
- **Straub Care Quantum** is a plan by a local, for-profit health care system.

Kaiser Permanente QUEST and **Straub Care Quantum** can be described as "closed panel" health plans because the care they provide is largely performed by their staff physicians in their own clinics and facilities. **AlohaCare**, **HMSA-QUEST**, and **Queen's Hawaii Care** are "open panel" health plans which contract with health care providers to provide care at various sites, largely, the providers' offices and facilities.

Although each QUEST health plan operates differently, all of the plans utilize managed care concepts in the provision of health care to QUEST members. Four (4) key components which are critical to the delivery of care in managed care and how these programs are used by QUEST health plans will be briefly described.



AZELEX®

(AZELAIC ACID CREAM) 20%

Right from the start.

A foundation of effects for the treatment of mild-to-moderate inflammatory acne.

- Normalization of keratinization.
- Antimicrobial activity.

Activities*		
Drug	Normalization of keratinization	Antimicrobial activity
AZELEX®	✓	✓
Retin-A®	✓	
Differin®†	✓	
Tropical Clindamycin†/ Erythromycin†		✓
Benzoyl Peroxide		✓
Benzamycin®†		✓
Sodium Sulfacetamide†		✓

*The exact mechanism of action is unknown.

- The only acne medication that offers *both* normalization of keratinization *and* antimicrobial activity.
- Can be prescribed in conjunction with other acne medications.¹
- No reported interactions with other topical or systemic acne medications.
- No bacterial resistance reported to date.

AZELEX® has been shown in vitro to possess antimicrobial activity against *Propionibacterium acnes* and *Staphylococcus epidermidis*; the clinical significance is unknown.

¹Double-blind, comparative clinical studies have not been conducted to evaluate comparative efficacy.

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Debbie Ross, Hawaii Territory Manager, 310 Front Street South, Issaquah, WA 98027, ross_debbie@allergan.com

AZELEX[®]

(AZELAIC ACID CREAM) 20%

For Dermatologic Use Only Not for Ophthalmic Use

DESCRIPTION: AZELEX[®] (azelaic acid cream) 20% contains azelaic acid, a naturally occurring saturated dicarboxylic acid. Structural Formula: $\text{HOOC}-(\text{CH}_2)_7-\text{COOH}$. Chemical Name: 1,7-heptanedicarboxylic acid. Empirical Formula: $\text{C}_9\text{H}_{16}\text{O}_4$. Molecular Weight: 188.22. **Active Ingredient:** Each gram of AZELEX[®] contains azelaic acid 0.2 gm (20% w/w). **Inactive Ingredients:** cetylal octanoate, glycerin, glyceryl stearate and cetylal alcohol and cetyl palmitate and cocoglycerides, PEG-5 glyceryl stearate, propylene glycol and purified water. Benzoic acid is present as a preservative. **CLINICAL PHARMACOLGY:** The exact mechanism of action of azelaic acid is not known. The following *in vitro* data are available, but their clinical significance is unknown. Azelaic acid has been shown to possess antimicrobial activity against *Propionibacterium acnes* and *Staphylococcus epidermidis*. The antimicrobial action may be attributable to inhibition of microbial cellular protein synthesis. A normalization of keratinization leading to an anticommedonal effect of azelaic acid may also contribute to its clinical activity. Electron microscopic and immunohistochemical evaluation of skin biopsies from human subjects treated with AZELEX[®] demonstrated a reduction in the thickness of the stratum corneum, a reduction in number and size of keratohyalin granules, and a reduction in the amount and distribution of filaggrin (a protein component of keratohyalin) in epidermal layers. This is suggestive of the ability to decrease microcomedo formation. **Pharmacokinetics:** Following a single application of AZELEX[®] to human skin *in vitro*, azelaic acid penetrates into the stratum corneum (approximately 3 to 5% of the applied dose) and other viable skin layers (up to 10% of the dose is found in the epidermis and dermis). Negligible cutaneous metabolism occurs after topical application. Approximately 4% of the topically applied azelaic acid is systemically absorbed. Azelaic acid is mainly excreted unchanged in the urine but undergoes some β -oxidation to shorter chain dicarboxylic acids. The observed half-lives in healthy subjects are approximately 45 minutes after oral dosing and 12 hours after topical dosing, indicating percutaneous absorption rate-limited kinetics. Azelaic acid is a dietary constituent (whole grain cereals and animal products), and can be formed endogenously from longer-chain dicarboxylic acids, metabolism of oleic acid, and ω -oxidation of monocarboxylic acids. Endogenous plasma concentration (20 to 80 ng/mL) and daily urinary excretion (4 to 28 mg) of azelaic acid are highly dependent on dietary intake. After topical treatment with AZELEX[®] in humans, plasma concentration and urinary excretion of azelaic acid are not significantly different from baseline levels. **INDICATIONS AND USAGE:** AZELEX[®] is indicated for the topical treatment of mild-to-moderate inflammatory acne vulgaris. **CONTRAINDICATIONS:** AZELEX[®] is contraindicated in individuals who have shown hypersensitivity to any of its components. **WARNINGS:** AZELEX[®] is for dermatologic use only and not for ophthalmic use. There have been isolated reports of hypopigmentation after use of azelaic acid. Since azelaic acid has not been well studied in patients with dark complexions, these patients should be monitored for early signs of hypopigmentation. **PRECAUTIONS: General:** It sensitivity or severe irritation develop with the use of AZELEX[®], treatment should be discontinued and appropriate therapy instituted. **Information for patients:** Patients should be told: 1. To use AZELEX[®] for the full prescribed treatment period 2. To avoid the use of occlusive dressings or wrappings 3. To keep AZELEX[®] away from the mouth, eyes and other mucous membranes. If it does come in contact with the eyes, they should wash their eyes with large amounts of water and consult a physician if eye irritation persists 4. If they have dark complexions, to report abnormal changes in skin color to their physician 5. Due in part to the low pH of azelaic acid, temporary skin irritation (pruritus, burning, or stinging) may occur when AZELEX[®] is applied to broken or inflamed skin, usually at the start of treatment. However, this irritation commonly subsides if treatment is continued. If it continues, AZELEX[®] should be applied only once-a-day, or the treatment should be stopped until these effects have subsided. If troublesome irritation persists, use should be discontinued, and patients should consult their physician. (See ADVERSE REACTIONS.) **Carcinogenesis, mutagenesis, impairment of fertility:** Azelaic acid is a human dietary component of a simple molecular structure that does not suggest carcinogenic potential, and if does not belong to a class of drugs for which there is a concern about carcinogenicity. Therefore, animal studies to evaluate carcinogenic potential with AZELEX[®] Cream were not deemed necessary. In a battery of tests (Ames assay, HGPRT test in Chinese hamster ovary cells, human lymphocyte test, dominant lethal assay in mice), azelaic acid was found to be nonmutagenic. Animal studies have shown no adverse effects on fertility. **Pregnancy: Teratogenic Effects: Pregnancy Category B.** Embryotoxic effects were observed in Segment I and Segment II oral studies with rats receiving 2500 mg/kg/day of azelaic acid. Similar effects were observed in Segment II studies in rabbits given 150 to 500 mg/kg/day and in monkeys given 500 mg/kg/day. The doses at which these effects were noted were all within toxic dose ranges for the dams. No teratogenic effects were observed. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed. **Nursing Mothers:** Equilibrium dialysis was used to assess human milk partitioning *in vitro*. At an azelaic acid concentration of 25 $\mu\text{g/mL}$, the milk/plasma distribution coefficient was 0.7 and the milk/buffer distribution was 1.0, indicating that passage of drug into maternal milk may occur. Since less than 4% of a topically applied dose is systemically absorbed, the uptake of azelaic acid into maternal milk is not expected to cause a significant change from baseline azelaic acid levels in the milk. However, caution should be exercised when AZELEX[®] is administered to a nursing mother. **Pediatric Use:** Safety and effectiveness in pediatric patients under 12 years of age have not been established. **ADVERSE REACTIONS:** During U.S. clinical trials with AZELEX[®], adverse reactions were generally mild and transient in nature. The most common adverse reactions occurring in approximately 1-5% of patients were pruritus, burning, stinging and tingling. Other adverse reactions such as erythema, dryness, rash, peeling, irritation, dermatitis, and contact dermatitis were reported in less than 1% of subjects. There is the potential for experiencing allergic reactions with use of AZELEX[®]. In patients using azelaic acid formulations, the following additional adverse experiences have been reported rarely: worsening of asthma, vitiligo depigmentation, small depigmented spots, hypertrichosis, reddening (signs of keratosis pilaris), and exacerbation of recurrent herpes labialis. **DOSSAGE AND ADMINISTRATION:** After the skin is thoroughly washed and patted dry, a thin film of AZELEX[®] should be gently but thoroughly massaged into the affected areas twice daily, in the morning and evening. The hands should be washed following application. The duration of use of AZELEX[®] can vary from person to person and depends on the severity of the acne. Improvement of the condition occurs in the majority of patients with inflammatory lesions within four weeks. **HOW SUPPLIED:** AZELEX[®] is supplied in collapsible tubes in a 30 gm size: 30 g - NDC 0023-8694-30. **Note:** Protect from freezing. Store between 15°-30°C (59°-86°F). **Caution:** Federal (U.S.A.) law prohibits dispensing without a prescription. Distributed under license; U.S. Patent No. 4,386,104.

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Case Management

What is it?

Case Management is a process to identify and assist members with complex or chronic conditions. This includes helping members who have difficulties in obtaining needed medical care to gain access and to obtain the appropriate care.

How do QUEST plans perform case management?

All of the plans have systems which identify members who may need case management/care coordination. Although plans are free to determine which recipients need case management, generally, plans priorities for case management are similar, and include high risk pregnancies, lengthy hospitalizations, and chronic diseases such as asthma or diabetes.

The two closed panel plans perform case management services using plan staff. The three open panel plans also perform most case management activities using plan staff. In addition, AlohaCare uses case management services of the community health centers. HMSA-QUEST contracts with the community health centers and other community agencies for specific outreach services such as transportation, translation and non-compliance counseling. Queen's Hawaii Care has contracted for patient education and case management to assist providers on a neighbor island in an Asthma Management Program.

Utilization Management

What is it?

Utilization management is the process which plans use to determine the appropriateness and need for medical care. Plans evaluate utilization patterns (including under-utilization and over-utilization) through data analysis and provider profiling. Among the specific programs used to make decisions of appropriateness and need are prior authorization, concurrent review, and retrospective review.

How do QUEST plans perform utilization management?

Although plans differ in the specific services/situations which require prior authorization, all plans utilize prior authorization in some form. For inpatient hospital, concurrent and retrospective reviews, all five (5) plans employ national standard criteria such as InterQual Severity of Illness/Intensity of Service, Milliman and Robertson's Length of Stay Guidelines and/or Medical Care Appropriateness Protocol (MCAP) as part of their utilization review protocols.

EDWARD W. KO, MBA, CPA

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The powerful 70-year-old tax strategy custom-designed perfectly for today's Ultimate Employee - the medical practitioner.

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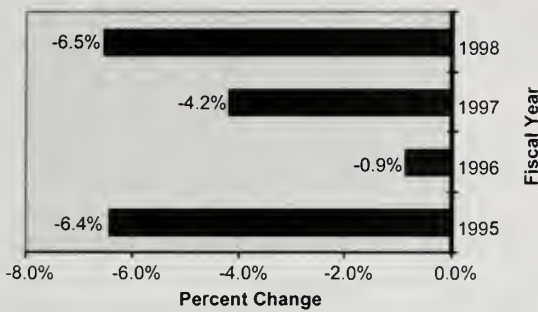
Professional proprietary plan, approved by regulatory authorities, that allows pension fund buildup liquidation without the usual big tax bite.

Ala Moana Pacific Center, Suite 818, Honolulu, Hawaii, 96814



Chart 12

Change in Per Capita QUEST Cost*



*TANF and GA Categories Only. Costs include projected costs for adult dental care after February 1996.

Source: Med-QUEST.

New Member Orientation/Education

What is it?

New member orientation/education are the activities performed by plans to educate and orient new members on the types of covered services and how to access those care services.

How do QUEST plans do this?

All QUEST plans send welcome packets of information including a member handbook, list of providers, summary of plan benefits, how a member can access care, and member rights and responsibilities. In addition, **HMSA-QUEST** conducts optional member orientation sessions; **Kaiser Permanente QUEST** has case management assistants and visiting nurses who work directly with new enrollees; **Straub Care Quantum** includes in its welcome packet the (800) number of its HMO Services personnel who can answer questions and assist members in obtaining services; **Queen's Hawaii Care** issues quarterly member newsletters which features educational material as well as updated plan member services; **AlohaCare** uses its Member Services department to reinforce the programs in the Member Handbook. Also, all plans send out Early and Periodic Screening, Diagnosis and Treatment (EPSDT) information. (Under Federal EPSDT rules children are entitled to a broader range of Medicaid services than adults and it is required that parents receive information explaining EPSDT benefits).

Standards for Waiting Times

What are these?

Each plan sets its own standards for acceptable waiting times for the following:

1. **Emergency care;**
2. **Urgent routine illness;** and
3. **Preventive and non-urgent routine care.**

What are the standards used by the plans and how are they being monitored?

Although each plan sets its own standards for waiting times, all plans are generally in agreement that the standard waiting time are as follows:

1. **Emergency care** is immediately (within the same day);
2. **Urgent routine illness** is from 24 to 48 hours; and
3. **Preventive and non-urgent routine care** is from 24-48 hours to 6 weeks.

Plans monitor these standards by on-site visits to providers (**Queen's Hawaii Care and HMSA-QUEST**), member surveys and appointment accessibility surveys (**HMSA-QUEST**), waiting time surveys (**Straub Care Quantum**), actual measurements (**Kaiser Permanente QUEST**), and member education on appropriate use of services (**AlohaCare**).

Quest Capitation History

When QUEST was initiated in August 1994, the premium savings associated with each enrolled member was approximately 6.4 percent lower than payments under the previous fee-for-service system. Chart 12 shows that more premium savings have been realized subsequently in fiscal 1996, fiscal 1997 and fiscal 1998, without compromising quality health care services to the QUEST population. Selected clinical measures reported under HEDIS guidelines have supported this contention. We believe much of the success is attributable to productivity gains and continuous quality improvements in both clinical and administrative areas of participating QUEST plans.

Towards the Millenium

The member's freedom to choose a health plan has always been an important consideration in QUEST. As participating QUEST plans continue to mature in utilizing managed care concepts in the provision of services to the Medicaid population, they are continuously driven to improving and upgrading their services. The plans are fully aware of their similar product offerings, and that quality of service is the key determinant to winning consumer confidence. QUEST members are the primary beneficiaries of this competitive structure established by the State. The DHS, through its Med-QUEST Division will continue in its efforts to monitor the quality of services offered by participating plans. The MQD is also exploring innovative ways to improve the delivery of health care services to the Medicaid population in Hawaii, currently not in QUEST.

As we move closer to the millennium, QUEST is working diligently to extend managed care services to more Medicaid recipients. We believe that managed care can effectively deliver to the Medicaid population, greater access to non-urgent and preventive health care services, and improvement in their general health status. The offering of long-term care services through a managed care setting is currently under consideration. Certain segments of Hawaii's community view this as a viable, "high-value" alternative to the existing fee-for-service system. With each existing, and potential service offering, consumer protection will continue to remain a key pillar of QUEST's efforts. And towards achieving this goal, QUEST will continue to use HEDIS measures to define quality of care services in a tangible, quantitative, and meaningful manner.



Life in These Parts

Waipahu GP 73-year-old **R.J. Maffei** retired in July after 40 years. A Waipahu resident related how the "plantation doctor" made house calls and constantly provided medical services and medicine at no cost to dying, elderly or low income patients. "He was always on-call 24-hours a day and it was never about money. I've never known a more compassionate doctor who cared for the well being of his patients."

Maffei says, "I'm not going to stay home and be idle, that's for sure." Re retirement: "Retirement? I hate it!" He plans to volunteer at an Iwilei drug rehab center and periodically check on long time patients who are seriously ill.

When asked for a business card, urologist **Steven Chinn** reached into his pocket and pulled out a packet of Viagra pills.

(Eddie Sherman MidWeek, July 22)

Hawaii patients are among the few in the nation with a law protecting them against managed care abuses. **Governor Ben Cayetano** signed a patients' rights bill in July to ensure that managed care plans emphasize "quality care rather than deny treatment based solely on profit." The AMA and some state medical societies launched a national campaign in July to fight "unfair, onerous and one-sided physician contracting practices."

Locally, **Arleen Jouxson-Meyers**, president of the patient-advocacy Hawaii Coalition for Health

had worked hard for the bill and says, "For the first time ever in Hawaii, all entities that provide health insurance came under the jurisdiction of the insurance commissioner."

Freeze Dried Sperm

Acclaimed world authority on fertilization, UH researcher **Ryuzo Yanagimachi** has shown that freeze-dried mouse sperm can fertilize eggs. He will next work with rabbit sperm. "If it works for rabbits, I think it will work on every species of mammals." Ryuzo's freeze dry technique may replace the expensive technique of storing cattle and human sperm in liquid nitrogen at minus 385°F. The technique involves sperm freeze dried in vacuum sealed vials and then rehydrated to inject in eggs (thus far, his experiment has been for 3 week periods).

Vincent DeFeo, chairman of the Anatomy & Reproductive Biology Department explains that in the liquid nitrogen technique, the sperm are still alive while in the freeze dry technique the sperms are dead and the sperm's DNA triggers the whole response.

Physician Moves

July: New neurosurgeon in town, **Eric Oshiro** opened at Kuakini Medical Plaza, Ste 711.

Elected, Appointed, & Honored

Kuakini Medical Center elected pulmonologist **Stuart Sugihara** chief of staff in the wake of

outgoing chief **Tad Iwanuma** who had served several terms efficiently.

Pediatric surgeon **Walton Shim** was elected chief of staff at Kapiolani Medical Center. Walton said, "In the face of the changing medical economy, it is important—despite the external pressures like decreasing physicians' fees and increasing regulatory controls—to keep quality care and keep being the patients' advocate and acting solely in the patient's best interests."

Potpourri

A college physics professor was explaining a particularly complicated concept to his class when a premed student interrupted him. "Why do we have to learn this stuff?" the young man blurted. "To save lives," the professor responded before continuing.

A few minutes later the student spoke up again, "So how does physics save lives?" he said.

The professor stared at the student for a long moment. "Physics saves lives," he said, "because it keeps the idiots out of medical school."

A chicken and an egg were lying in bed. The chicken smoked a cigarette with a satisfied smile on its face while the egg frowned, looking put out. The egg muttered to no one in particular, "Well, I guess we answered that question."

Playboy Party Jokes, Sept '98



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priory

The Priory takes pride in the many talents of its students. Emily and Brittany are the daughters of Dr. Sonny and Jennifer Wong of Kailua. Emily has played violin for two years and Brittany for nine. Brittany performs with the Priory Chamber Strings, the Hawaii Youth Symphony II, and the Suzuki Strings Tour Group.

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(Contributions by Mike Ishioka)

A nature lover took his new car for a spin in the country. A rabbit ran in front. He tried to avoid it, but too late. He stopped and found a limp dead body. He felt so bad, he started to cry. A car stopped and a sympathetic lady surmised the situation. "Never fear. The Avon Lady is here." She pulled out a spray can and sprayed the dead carcass. The rabbit sprung to life and went hopping down the road. Every few hops he would stop, turn and wave. The man was curious. He asked to see the spray can. The directions said, "This restores life to hair and gives it a permanent wave."

Five surgeons were having lunch. First surgeon: "Accountants make the best patients. When you open them up, everything is numbered inside."

Second surgeon: "Nah, librarians are the best. Everything inside is in alphabetical order."

The 3rd surgeon responded: "You can't beat electricians, man! Everything inside is color coded."

The 4th surgeon interrupted, "I prefer lawyers. They're heartless, spineless, gutless and their heads and butts are interchangeable."

Finally the 5th surgeon quietly commented, "By far the engineers are the best patients. They always understand when you have a few parts left over after surgery."

HMSA Mail-out Survey

Len Howard, HMA President says:

"Our association has received much negative reaction from our physicians and their patients to the recent HMSA member satisfaction survey. In October, 1997, HMA adopted a policy that HMSA stop linking bonus payments to survey results. We believe that such an incentive plan poses the danger of creating a conflict of interest between the patient's needs and the desires of the insurance company.

Despite the letter attached to the survey, many patients still assumed that their doctors were under investigation. Obviously, this survey has had a damaging effect on the doctor-patient relationship.

All of us want to improve our quality of service in any possible way. However, unstated in HMSA's letter was that this survey will result in some physicians receiving bonus payments. Our members do not want bounty payments or bribes. We object to HMSA's offering them."

HMSA's Client Priorities are Wrong. Hypocritical

"It is ironic that HMSA would collect quality-of-care data for its patient customers, while at the same time increasingly undermine the patient's ability to use that information by restricting the patient's free choice of physicians.

In free markets, consumers obtain information about quality through neutral parties (e.g. "Consumer Reports") and make their own purchasing choices. If HMSA and state government would work together to offer Medical Savings Accounts, patients would have a much greater choice, and quality rating systems would naturally evolve as a result of customer demand.

The result would be a marketplace more responsive to the consumer's needs, without the expense, complexity and uncertainty of an unproven reward system."

Dan Helinga (Via the Internet)

National News

When physicians complained about falling fees in Florida, Texas and Ohio, Aetna cancelled meetings with state and local medical associations arguing that anti-trust laws barred these groups from discussing their complaints. The AMA urged the doctors to rebuff the insurers' demands.

Aetna's chief executive, **Richard Huber** wrote to the AMA president that "The company's limits on coverage are determined by the employers who purchase our products. Without these limitations, our products would be unaffordable."

Dr Arthur Leibowitz, Aetna chief medical officer explained that the doctors's complaints were part of business discussions. "We have successful contracts with our 200,000 physicians. We cannot unilaterally change a provision of a contract. If you don't like them, you can quit or better, negotiate with us."

A United Healthcare VP, **Dr Kaveh Saffari** said, "United runs on a fixed total budget. It's not just a United Healthcare issue—It's the medical system."

Conference Notes

"New Approaches To and Current Management of Heart Failure" VP **Barry Greenburg**, Professor of Medicine UC SD, QMC, May 5, 1998, Fri. a.m.

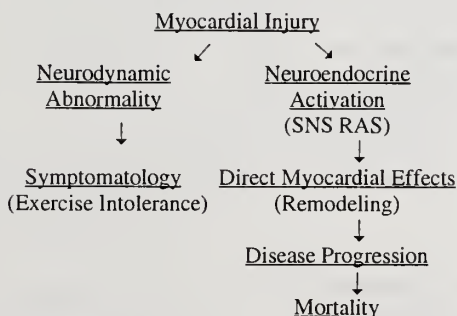
Burden of CHF

Five million new cases/yr; 6-10% over age 65; 800³ hosp discharges; 1/4 million deaths/yr; cost \$40 billion/yr (Hosp cost=2/3)

Goals of CHF Therapy

- Slow the disease progression
- Reduce risk of mortality & morbidity
- Improve quality of life and clinical status by alleviating sy's

Pathophysiology of CHF



Neurohormonal Changes:

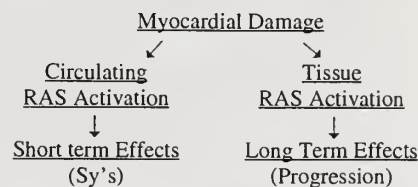
Asymptomatic Pts: Activation of sympathetics
Symptomatic Pts: Early activation even preceding sy's

Ventricular Remodeling:

- Dilation, ventricle
- Hypertrophy

- Increased globular shape
- Mitral & tricuspid regurgitation

Renin-Angiotensin System (RAS)



Therapy CHS

Survival Effect of ACE:

Trials	ACE	Outcome
CONSENSUS	Enalapril	Increased overall survival
SOLID	Enalapril	"
SAVE	Captopril	"

***ACE is underutilized in pts with CHF.

High Catecholamine Levels

- Direct Effect: cardiac myositis
- Down regulation of beta receptors
- Arrhythmogenic (40% of pts die)
- Renin-angiotensins sy's

Beta Blockers in CHF

(Historically contraindicated)

- Improves cardiac function (Sweden report)
- Experience with most BB limited
- CARVEDILOL (New BB)

U.S. Carvedilol HF Trials:

CHF x 2 mos; LVEF ≤ 35%

Overall Survival: 65% reduction overall mortality

Hospitalization: 27% reduction

Carvedilol Mild HF Trial:

50% reduction in events (death, hospitalization, CHF)

***Carvedilol is well tolerated in mild to moderate HF

Standard Therapies CHF

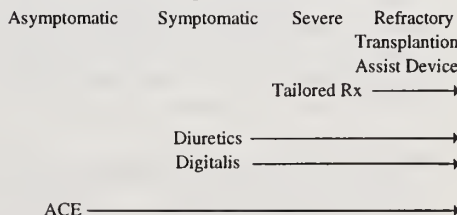
- Digitalis (Pts with NSR)
When digitalis is discontinued, CHF rate rises

***Therefore, digitalis + diuretics + ACE =

Best therapy

- Diuretic
 - Only in pts with volume overload
 - Stimulates renin and catecholamines
 - Enhances ACE and dig effects

- Continuum of Care



- Refractory CHF (reversible Causes)
 - Comorbidity (fever, thyrotoxicosis, anemia)
 - Ischemia
 - Arrhythmias or heart block
 - Drugs which depress cardiac function
 - Non-compliance (poor comprehension of rationale of therapy; how & when to take drugs, ie education; unable to purchase drugs; failure to continue after sy's subsidy; willful non-compliance)

Calcium Channel Blockers

- First generation CaCB increases neuro-hormonal activity → worsening CHF
 - Negative inotropic effects
 - New CCB: **MIBEFRAZIL**: Unique: blocks L & T channels
 - \pm ↓ HR
 - Coronary and peripheral vasodilator;
 - No negative inotropic effect
 - Neurohormonal: No reflex ↑ S Node
 - T channel regulator
 - Survival data:
- (Mark I Study Report in Aug)

Angiotensin II Receptor Blockers

(May be better than ACE?)

(Losartin Study: 1/2 - 2 yrs hence)

Cardiac Transplants

**UC SD Survival data c Class II & IV patients:

Overall 88% Survival rate: 93% survival at 1 yr
87% survival at 3 yr
83% survival at 5 yr

Lt Ventricular Assist Device

(with portable battery = bridge to transplant)

Other Therapies CHF

- Gene therapy (normalizes altered Ca handling; therapeutic angiogenesis etc)
- Non-Gene Therapy: (molecular approach to CHF)
- Growth Hormones (Normalize ejection fraction)

The Only Good H. Pylori Is a Dead H. Pylori

Nimish Vakil, Professor of Medicine

Disease Management

Explicit, population based approach to identify patients with a disease; intervene with specific programs of care and monitor clinical and economic outcomes.

H. Pylori Infection

Causal role in peptic ulcer and eradication of infection prevents relapse.

California Medicare pts: Only 39% of Medicare pts c peptic ulcer disease were tested for H. Pylori; and less than 1/2 who tested positive received AB Rx.

Dyspepsia

- Persistent or recurrent abdominal pain or discomfort in upper abdomen
- Population based surveys show 20 to 30% of

To place a classified notice:

HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in HMJ as space is available.

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Locum Tenens available.—Board-certified Family Practice, 14 yrs clinical experience in Hawaii. Office coverage, Deborah C. Love MD: home Oahu: (808) 637-8611; cel ph: (808) 295-2770.

population have dyspepsia. 1987 Stats: 1.5 million outpt visits and 0.8 million ER visits 2° dyspepsia.

New Guidelines in Dyspepsia Therapy

Non-invasive testing and H. Pylori treatment if tests positive.

Recent data: High rate metronidazole resistance and rising rate of Clarithromycin resistance.

*H. Pylori a/c CAD, CVA, urticaria and other diseases. Questionable beneficial role of H. Pylori in preventing: NSAID gastropathy & GERD.

Miscellany

"Your driver's license says you should be wearing glasses," the traffic cop said to the speedster. "Why aren't you wearing them?"

"I have contacts," the speedster said.

"I don't care who you know," the cop said,

"You're getting a ticket anyway."

"Doctor, how long will my arm be in this cast?"

"At least six weeks."

"When you remove it, will I be able to play the violin?"

"Of course."

"That's great! I could never play it before."

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Misc.

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Announcement

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For Sale.—Established, thriving general practice in Kailua-Kona. Completely equipped. TURNKEY OPERATION. Three exam rooms, B/R. Modern building, good parking, access. Flexible arrangements possible. Call 329-6682.

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Hawaii Permanente Medical Group.—Hawaii's most established multi-specialty group 300 physicians recruiting BC/BE internist busy outpatient internal medicine clinic largest Kaiser Maui facility, Wailuku. Position immediately available. Call 3-4 times monthly, affiliated Maui Memorial Hospital. For more information, call 834-9111. Send CV: Physician Recruitment, HPMG, 3288 Moanalua Rd., Honolulu, HI 96819. Fax (808) 834-3994. EOE.

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You are invited to attend...

– Friday Noon Conference –
Luncheon

Vascular Disease and Stroke: New Therapies

Leo Maher, MD

October 2, 1998, 12:30 – 1:30 p.m.

Doctor's Dining Room

Learning Objectives

At the conclusion, participants will be able to:

- Describe role of antiplatelets in stroke prevention.
- Understand basic classification of stroke.
- Summarize the concept of acute stroke care.

We would like to acknowledge the generous Educational Grant from Sanofi Pharmaceuticals, Inc.

– Tumor Board Conference –
Luncheon

Management of Intractable Neuropathic Pain

Stuart DuPen, MD

October 5, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants will be able to:

- Describe pathophysiology of neuropathic pain.
- Discuss limitations of common neuropathic pain treatment strategies.
- Understand new techniques for managing intractable neuropathic pain.

We would like to acknowledge the generous Educational Grant from Knoll Pharmaceuticals Company

– Friday Noon Conference –

Breast Conservation for Early Stage Breast Cancer

Laeton J. Pang, MD

October 16, 1998, 12:30 - 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants will be able to:

- Understand the basic surgical and radiation principles for optimal outcome.
- Interpret the results of the major prospective randomized trials on breast conservation vs. mastectomy.
- Summarize the criteria for patients not eligible for breast conservation.

Please call Fran Smith at 522-4471 for more information.



With friends like these, who needs enemas?

Speaker Gingrich led the House of Representatives in support of the insurance lobby in refusing to halt HMO abuses. If Newt were astute he would grab this issue and side with 3/4 of voters and make managed care plans responsible. When the AMA, the unions, the trial attorneys, and 75% of the voting public are in agreement that managed care must be held liable for medical decisions, one might expect leadership to respond. "Republican leadership" is becoming an oxymoron. They have been wrong about women's rights, wrong about religious freedom, wrong about tobacco legislation, wrong about protecting patients from HMOs, and now some are even recommending that any doctor who legally prescribes drugs to assist suicide (according to Oregon law) should lose his DEA number.

If you think you did something wrong, you're right.

How many of us have had patients who blacked out briefly with minor surgery in the office, or rarely even with topical anesthetics? In a recent Indiana malpractice case, a physician was held responsible for injuries caused by his patient who had a history of blacking out after vaccinations. The patient lost consciousness while in the doctor's office, but later was allowed to drive himself home. When he blacked out again after leaving the physician's office, he collided with another car, causing serious injury to the driver. According to the courts, the doctor was liable, and had a duty to take precautions to monitor and warn the patient following the injection. The court ruled that a reasonably prudent person in the same circumstance would not have permitted the patient to drive himself from the doctor's office.

It takes most people five years to recover from a college education.

With an incredible degree of rotten taste, *Abercrombie and Fitch* in their back-to-school catalog offered a full page of recipes for campus drinking parties. On a page titled *Drinking 101*, ten hard core cocktails are described. "Rather than the standard beer binge, indulge in some creative drinking this semester." Deaths on campus from binge drinking, the fact that 3/4 of college students are under age 21, and that 2,315 Americans between the ages of 15 and 21 died in alcohol-related car crashes in 1996 alone, all means nothing compared to the A&F crass grubbing for profits. Abercrombie and Fitch has become hugely profitable in recent years, largely due to its success with the fickle college crowd. The share price has almost doubled since the initial public offering in 1996. Mothers Against Drunk Driving (MADD) is more than angry and has accused the corporation of placing profits ahead of health and safety for its clientele.

A free country offers what a police state denies—privacy.

The Department of Health and Human Services has some changes in mind which will effect your lives now and forever. Slipped into the health reform law two years ago was a plan for a cradle-to-grave "unique patient identifier." Moreover, the HHS's latest plan is that every doctor would apply for and be assigned a one-time eight digit alpha-numeric identifier which he/she will keep forever even with relocation or change in specialty. Another change would require all insurers to accept a standardized claim form. Get the picture? The patient is a number, the doctor is a number, the form is standard. When the Clinton people held a hearing recently, people woke up to this frightening big brother approach and flooded their lawmakers with calls. With the equivalent of a bar code stamped on everybody's forehead, medical privacy will be as dead as the Clinton presidency.

We spend money the old fashioned way. We burn it.

The story goes that AMA staffers were directed to seek non-dues mechanisms to increase revenue. Thus, a deal was prepared with Sunbeam to endorse certain of their products in order to generate income, much like the American Dental Assn. and the American Women's Medical Assn. have done with product endorsements.

John Seward, MD, the CEO, and Trustees failed to think the matter through and await discussion by the House of Delegates. Dr. Seward signed the contract took the photo-op, and the shinola hit the fan. The other shoe has dropped and the American Medical Association has reached a settlement with Sunbeam Corp. regarding the

proposed endorsement fiasco. Board Chairman Randy Smoak, M.D., announced that the AMA will pay \$7.9 million in damages and another \$2 million in legal expenses. Very expensive, yes, but still far cheaper than going to court where the cost could have been exponential.

Don't let a pretty face turn your head.

An anecdote in the *Managed Care Interface* noted an unexpected cost item at a Maine HMO. A newlywed wife dropped off her husband for his first day of work, and flashed her left breast at him for good luck. A passing cab driver caught the display, and lost control of his cab which careened across a curb and into the Johnson Medical Building. The jarring impact caused a dental tech to slice off a piece of a patient's gum while she was cleaning his teeth. In painful reflex, the patient clamped his jaw hard enough to sever the technician's fingers. Moral: when someone else is offered an appetizer, try not to salivate.

There are trains leaving every hours, all headed for oblivion.

In Colorado an intoxicated driver went over a roadside cliff in his pickup, causing serious injuries to himself and one passenger, and another passenger was killed. Because the investigating officers smelled liquor on the driver's breath, a blood test was taken in the hospital without authorization. Subsequently, when the driver was charged with vehicular homicide and vehicular assault, the trial court determined that the blood test was improperly obtained and therefore inadmissible as evidence. The appellate court vacated the suppression order, stating that the state troopers had probable cause to arrest the man for driving while intoxicated. Congratulations to the Hawaii Legislature (Yes!) because now Hawaii state law provides that emergency room physicians have the right (and duty) in all auto crashes, to obtain blood to be tested for alcohol, and other drugs, without patient consent. As one mainland consultant said, Hawaii is 20 years ahead of the mainland on this issue.

If two wrongs don't make a right, try three.


Health Care Services Corp, aka Blue Cross Blue Shield of Illinois, pleaded guilty to eight felonies, including conspiracy to obstruct a federal audit and obstruction of that audit. Additionally, there were six instances of false statements based on actions of managers, five of whom have been indicted, and two others have pleaded guilty. Specifically they lied to auditors, destroyed documents, mishandled claims, shredded claims, deleted and manipulated files, shut down the telephone system at times of high volume, all in order to receive \$1.3 million in unwarranted bonuses and incentives. The Blues will pay \$144 million to settle the Medicare fraud charges, and the whistleblower will get at least \$21 million for spreading the news. She first told her story to senior Blues executives after she was told to shred 10,000 unprocessed claims, but they refused to help. She filed a lawsuit under the federal *False Claims Act*, and as they say, the rest is history.

There are two kinds of people, those who finish what they start and so on.....

Numerous investigational studies have confirmed that addicts do like clean needles, and the occurrence of new HIV patients decreases with needle exchange programs. Donna Shalala, PhD, secretary of Health and Human Services has declared that the programs are an effective way to reduce HIV infection rates, but left the ban on federal funding intact. HHS now admits the program works but, for political reasons, won't provide money, and has shifted responsibility to state governments to decide on prevention strategy. Conservative lawmakers insist that the program increases drug use, but data refute that claim. Estimates are that if federal resources had been available, as many as 10,000 HIV infections could have been prevented since the beginning of the Clinton administration. What's that line about "an ounce of prevention.....?"

Addenda

❖ Now here's a spokesperson you can believe. "Viagra is not an aphrodisiac," said FDA drug boss Janet Woodcock.
Aloha and keep the faith — rts ■



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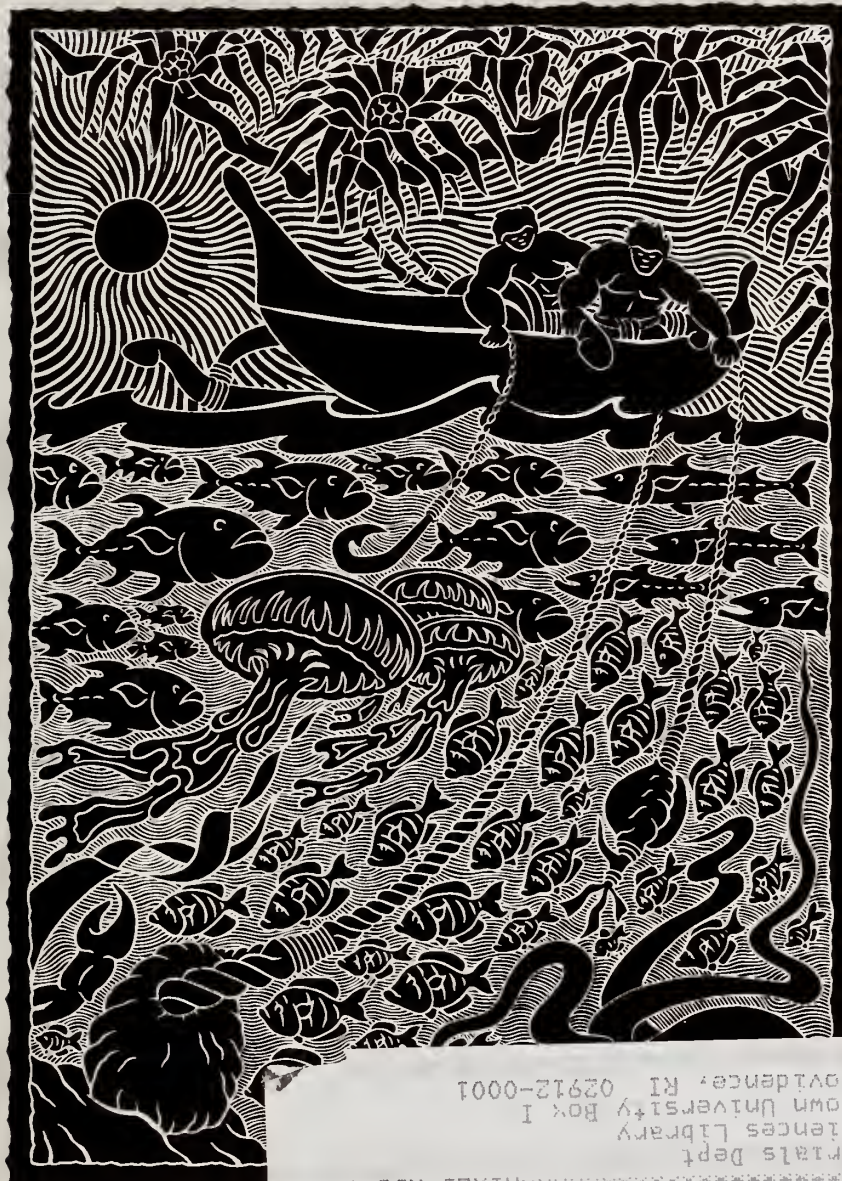
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- Stayed up late reviewing clinical practice guidelines
- Helped us resolve our members' most challenging care concerns
- Flown in from the Neighbor Islands to participate in quality management meetings
- Helped us provide evidence of improved outcomes for members
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- Increased immunization rates for Hawaii's keiki
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- Gone beyond the call to demonstrate truly excellent standards of care



Mahalo! We couldn't have done it without you!



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Leho He'e

The best lure for octopus fishing is made from a cowry shell. It is irresistible.

A Call to Physician Authors

We are always looking for interesting scientific articles and we would like to hear from more of you. The *Hawaii Medical Journal* is a peer reviewed publication and covers a wide variety of topics. To submit a manuscript please call us for manuscript guidelines. Fax or call for your requests to: Hawaii Medical Journal, 1360 S. Beretania Street, Second Floor, Honolulu, Hawaii 96814, Phone (808) 536-7702 or Fax us at (808) 528-2376, e-mail: hma-assn@aloha.net.

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You are invited to attend...

– Tumor Board Conference –
Luncheon

New Development In Treatment of Metastatic Breast Cancer

Reuben Guerrero, MD

November 2, 1998, 12:30 – 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants should be able to:

- Understand the rationale in the development of oral chemotherapy in treating metastatic breast cancer.
- Recognize it's value when considering quality of life issues (i.e., home based therapy, oral administration vs IV infusion etc.)
- Evaluate the difference, using current IV 5FU in comparison to oral 5FU.

We would like to acknowledge the generous Educational Grant from Roche Pharmaceuticals

– Friday Noon Conference –

Environment of Care Trends for the 90's: an Abbreviated Study of Issues Which Impact the Environment of Care for Patients and Employees

*Kevin Matsukado, Rose Arpon, Clayton Takara, &
Michelle Fisher*

November 6, 1998, 12:30 – 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants should be able to:

- Describe specific environment of care issues that may impact daily practices.
- Understand and Identify Infection Control, Tuberculosis and Bloodborne Pathogens.
- Summarize Radiation Safety, Hazard Communications, Fire Safety, Chemical Spills, Body Mechanics, and General Safety.

– Ophthalmology Conference –

Glaucoma – Differential Diagnosis and Management

Stefan Karas, MD

November 19, 1998, 4:30 – 5:30 p.m.

Straub Eye Department

Learning Objectives

At the conclusion, participants should be able to:

- Recognize unusual glaucoma cases.
- Evaluate and manage difficult glaucoma cases.
- Understand surgical considerations in difficult glaucoma cases.

Please call Fran Smith at 522-4471 for more information.



Editorial

Norman Goldstein MD
Editor, Hawaii Medical Journal

Laparoscopy I

When Bradley D. Wong MD was asked by Henry Yokoyama MD to serve as Guest Editor for a Special Issue on Laparoscopy, he said, "Yes, but..." the "but" I understand, implied he was too busy, as were his associates. He was, however, able to assemble a phenomenal amount of talented "laparoscopists" as you will see in this Part I of Laparoscopy Special Issue and in Part II to appear early in 1999.

I do not believe there is a Laparoscopy Society yet. A few years ago, the concept of a Laser Society was inconceivable too. Well, we do have an American Society for Laser Medicine and Surgery. Our meetings, like the manuscripts in this Special Issue on Laparoscopy, cut across all specialties in medicine and surgery.

Even the non-surgeons and non-surgical readers will find Bradley Wong's Update and the manuscripts he collected truly fascinating, must reading for all physicians. Bradley Wong is an Assistant Professor of Surgery in our Medical School. He was honored as Teacher of the Year by the UH Surgical Residency program in 1995; the Queen's Medical Center named him Outstanding Physician in 1966; and he received Excellence in Teaching Awards in our Medical School in 1985, 1990 and 1995. He extends his teaching skills to our readers in this Special Issue.

Mahalo nui loa, Brad Wong.

The Index to the Journal - Dec 1998

Every year, the staff of the Hawaii Medical Library prepares the Index to the Journal. This is a time-consuming task, but Marlene M. Ah Heong and Carolyn S.H. Ching are doing it once again with smiles of a job well done.

As Journal manuscripts become more diverse in subject matter with many authors sharing in the research and the preparation of the articles, an accurate and complete index is mandatory.

Even with computers in the office and computers at home, without the Reference Section and CHIS (Community Health Information Service) at the Library, good medicine would be more difficult to practice for Hawaii physicians.

Thanks to John Breinich, Director of the Library, to Sharon Berglund, Judith Kearney, Tina Okamoto, and Christine Sato at the Reference Section.

Tetanus: Still "Inexcusable"

Harry Arnold, Jr. MD would be proud to see this Case of the Month by Doctors Mysliwiec and Zacher of the Tripler Army Medical Center. As Consultant Emeritus at Tripler, I too am extremely proud of the work our military physicians are performing at Tripler—not just for the active duty military and their dependents, but for many non-military patients in the Pacific. In July 1995, Tripler celebrated its 75th year of service in Hawaii.¹

Tetanus is still with us! Be sure to read the Case of the Month on page 689.

References

1. Special Issue: Tripler Army Medical Center, 75 Years of Military Medicine. *Haw Med J*, 54:653-684.

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Medical School Hotline

Hawaii Benefits from Graduate Medical Education

**Sheila Schiel, Executive Director
Hawaii Residency Programs, Inc.**

The future of Graduate Medical Education (GME) in Hawaii is uncertain. Not only is there heated debate over whether there is a need for more physicians in the current health care system, but the very funding used to train physicians is rapidly declining. With all the increased attention and controversy focused on the role and value of GME today, one has to ask, "Does Hawaii need GME?" The resounding answer is, Yes!

Currently, about 250 residents are receiving their postgraduate training in one of fourteen ACGME accredited training programs sponsored by the University of Hawaii John A Burns School of Medicine. Unlike the traditional mainland model in which residents train at a university-owned medical center, Hawaii relies on its community hospitals to provide the training venue for young physicians.

Through a collaborative effort between the School of Medicine and the community hospitals, Hawaii has succeeded in developing a viable, cost efficient system for training physicians. This system was created over twenty years ago because Hawaii did not want to

be dependent upon mainland resources, including the recruitment of physicians, to sustain our health care system. Without the continued support and endorsement of local physicians and the medical community at large, there is the risk of losing this important educational resource.

Some critics contend that with the growing predominance of managed care and the perception of an oversupply of physicians, the training of more doctors in Hawaii should cease. Others argue that GME is too expensive and the services of residents can be purchased more cost efficiently from other health care providers. These arguments are both inaccurate and short-sighted. The value of GME goes far beyond simply training new physicians. In fact, the very presence of quality GME programs infuses academic rigor into the underlying health care system and improves the standard of health care delivery throughout that system. It also guarantees a continuing supply of new physicians without reliance on mainland resources. GME not only improves Hawaii's health care system, but the lives of Hawaii's citizens and economy. Here's why:

- The presence of GME expands the collective pool of medical knowledge within the community by drawing young physicians from other academic centers, both mainland and abroad, to Hawaii.
- Hawaii's postgraduate residency training programs provide local students the opportunity to train, and possibly establish their practice after graduation in the State.
- Residents provide much of the teaching for medical students.
- Residents provide quality medical care to Hawaii's indigent and to others in underserved areas of the State.

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- Residents provide medical care to Pacific Rim countries which also helps develop referral networks back to our community hospitals.
- Because of Hawaii's diverse population and unique epidemiology, the Programs offer the world's brightest and most promising young physicians an unsurpassed training experience, including exposure to alternative forms of medicine practiced in the Pacific region.
- GME accreditation requires programs to conduct research and scholarly activity. Teaching facilities become active participants and beneficiaries of these research activities.
- GME enhances Hawaii's economic base by capturing millions of dollars in Medicare reimbursement each year.
- GME provides teaching opportunities for attending physicians in an academic environment and plays an important role in attracting and retaining top physicians for our State.
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Case of the Month

Tetanus: Still "Inexcusable"

Angela G. Mysliwiec MD and Lisa L. Zacher MD
Department of Internal Medicine
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Tripler Army Medical Center

Introduction

Deemed "the inexcusable disease" by Edsall in 1876,¹ tetanus remains a potentially fatal disease that is easily preventable. Although vaccination is stressed, and its benefit is well-known, many cases are reported each year in the United States, especially in those shown to be at increased risk.² Tetanus must be recognized in its early stages, and it should be considered in patients with uncertain immunization status. Herein, we describe the case of a patient from the Marshall Islands who received treatment in our medical facility.

Case Report

A 22-year-old Marshallese male presented with complaint of fever and lower back pain. He was admitted to the hospital in Majuro where he was found to have a temperature of 102 degrees Fahrenheit and significant muscular rigidity. He was treated with diazepam five milligrams intravenously and ibuprofen 800 milligrams orally as needed for symptoms. He was given penicillin G, ceftriaxone, and gentamicin as well as tetanus toxoid.

There was no known past medical history, and immunizations were reportedly up-to-date. The patient had undergone no surgeries. His only medication prior to admission included an occasional acetaminophen; he had no known drug allergies. He smoked approximately three cigarettes per day, indulged in marijuana on the weekends, and consumed alcohol infrequently. He was unemployed, but his daily activities included carrying heavy sacks. He lived with his father and three others; he had no siblings.

The patient was transferred to our medical facility five days after his initial presentation. There had been no significant change in the patient's condition over this time period. On arrival history was obtained with the assistance of an interpreter; there was no history of trauma, bite, or penetrating wound. He denied headache, photophobia, or other symptoms. The medical attendant reported that most adults in Majuro receive only the initial tetanus immunization as children and rarely receive booster shots.

On physical examination, the patient was afebrile (temperature, 98.4 degrees Fahrenheit) and tachycardic (pulse, 117 beats per minute); his blood pressure was 130/59 and respirations were 27 breaths per minute. In general, he was alert and oriented; there was noticeable discomfort with movement. Pupils were equal and reactive, extraocular movements were intact. There was decreased jaw mobility with a two-centimeter opening. Nuchal rigidity was also evident. Lungs were clear to auscultation. Heart sounds were regular. The abdomen was intermittently rigid with audible bowel sounds. Superficial cutaneous abrasions were noted on the right elbow and bilateral pretibial regions; otherwise, no obvious puncture wounds or entry sites were identified. Neurologic examination was notable for restricted conjugate gaze, risus sardonius with mild stimulation, and increased spastic tone throughout; there was no clonus. Laboratory data including complete blood count, electrolytes, and urinalysis which were within normal limits; hepatic panel was notable for an aspartate aminotransferase of 202 U/L. Creatine kinase was 5520 U/L.

The patient was admitted to the intensive care unit where observation was required due to the need for sedation and subsequent risk of respiratory compromise and cardiac arrest. He was given human tetanus immune globulin (HTIG) 500 unit dose to neutralize the tetanus toxin. His antibiotic regimen was altered to include metronidazole 500 mg intravenously every six hours given its decreased GABA agonist activity compared to penicillin G. Supportive measures were initiated including diazepam 10 milligrams intravenously every six hours for sedation, seizure prophylaxis, and control of muscle spasms. Propanolol 20 milligrams orally every six hours was given to decrease sympathetic tone. An intravenous fentanyl drip at 100 micrograms per hour was initiated to control pain. Sedation was later achieved with a lorazepam drip at one milligram per hour. Decubitus and aspiration precautions were observed; deep venous thrombosis prophylaxis was with heparin 5,000 units subcutaneously twice daily. Unnecessary stimuli were avoided.

Treatment was largely supportive throughout the remainder of our patient's one month hospitalization. Attention was focused on preventive measures to include control of spasms, autonomic hyperactivity, pain, stimuli, and malnutrition. Opisthotonic posturing was noted with verbal and tactile stimuli and occasionally while the patient slept. Nutrition remained marginal for the first two weeks of the hospitalization despite efforts to provide supplementation, and a percutaneous endoscopic gastrostomy tube was placed by gastroenterology on hospital day number nineteen. The patient's rigidity gradually subsided and sedation was tapered. He recovered completely and was without neurological sequelae. There were no respiratory complications. The patient was discharged on hospital day number thirty with a plan for rehabilitation of deconditioning.

This manuscript has been seen and approved by all authors. The opinions or assertions contained herein are the private views of the authors and are not to be construed as official or as reflecting the views of the U.S. Department of the Army or the Department of Defense.

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Discussion

The incidence of tetanus in the United States has declined significantly since 560 cases were reported in the year 1947.³ The reported average of 41 cases annually for the years 1995-1997 was the lowest to date with 0.15 cases per million population.² Immunization remains the key to prevention; few patients with tetanus (13%) have received a primary series of tetanus vaccination and only 33% receive proper wound prophylaxis.² Several factors have been associated with decreased immunity, and despite emphasis on the need for immunization, the risk remains highest in minorities, the elderly (especially women), the poverty-stricken, the uneducated, and those born outside the United States.⁴ This trend has gone unchanged for decades and accounts for higher mortality rates in our elderly population.^{2,4,5} In underdeveloped countries the figures remain staggering with 50,000 deaths due to tetanus each year.⁵

Trismus is reported in almost all patients with tetanus.^{5,6} The initial presentation is often accompanied by dysphagia, headache, restlessness, and nuchal rigidity.^{6,7} In the generalized form of tetanus, the condition progresses to spasms with a "sudden burst of tonic contractions of muscle groups causing opisthotonus, flexion, and adduction of the arms with clenching of the fists on the thorax".⁷ Extension of the legs completes this picture of what has been described as the "tetanic seizure".^{7,8} Spasms occur with minimal stimuli and can be quite painful.⁹ All muscle groups can be affected leading to respiratory paralysis, a well-known complication of the disease.^{8,9} Autonomic dysfunction has emerged as the leading cause of death in these patients and is characterized by tachycardia, arrhythmias, excess sweating, and labile hypertension.^{6,10}

The diagnosis of tetanus remains one of clinical suspicion. Laboratory data is often either unreliable or unavailable.^{5,8} Muscular rigidity coupled with sympathetic overactivity distinguishes tetanus from other ailments which it may mimic such as tetany, meningitis, stiff-man syndrome, rabies, hysteria, strychnine poisoning, and dystonic reactions.^{9,11} Patients with a history of injury followed by symptoms and those without clear portal of entry should be considered at risk for tetanus and treated.^{7,11}

Treatment focuses on efforts to neutralize the toxin, debride the wound, and provide supportive care.⁵ HTIG neutralizes the toxin and shortens the course of the disease.^{5,8} Surgical debridement and removal of foreign matter may be required in some cases. Administration of metronidazole has been shown to improve survival, and special attention should be given to airway protection, inhibition of

seizures, and treatment of autonomic dysfunction.⁵ Benzodiazepines are recommended to control spasms, provide sedation, and prevent tetanic seizures; neuromuscular blockade may be considered in severe cases.⁸ Control of autonomic dysfunction can be achieved with beta blockers or morphine; however, beta blockers have been associated with an increased risk of cardiac arrest and should be administered in a monitored setting.^{5,8}

Prevention has gone unchanged for decades and consists of vaccination and wound care.¹² Primary immunization in patients younger than 7 years of age includes injection with diphtheria, tetanus, and pertussis (DTP) vaccine at ages 2, 4, 6 and 15 months with boosters at 4 to 6 years and at 11 to 12 years of age.^{2,5,13} Three injections with tetanus and diphtheria (Td) four weeks apart followed by booster at one year is reserved for those requiring primary immunization at an age greater than seven.^{5,11} All patients should receive Td booster every ten years. Wound prophylaxis is based on the patient's immunization status and classification of the wound as tetanus-prone (greater than six hours old, contaminated, deep and infected) or nontetanus-prone (less than six hours old, clean, superficial, and noninfected).^{2,5,8} Tetanus-prone wounds in patients with uncertain immunization status require primary immunization and HTIG.^{2,10} If immunization can be proven or the wound is clean, no HTIG is required.² If it has been more than ten years since the last booster in a nontetanus-prone wound or more than five years in a tetanus-prone wound, a booster shot should be given, even in those with up-to-date immunization.²

This case illustrates the classic presentation of tetanus. No portal of entry is identified in many patients, and uncertain immunization status cannot be relied upon. Our patient responded well to supportive therapy and had an uncomplicated course. The importance of vaccination cannot be overemphasized. Unfortunately, our knowledge of the fatal nature of tetanus and the methods by which it can be prevented has not aided us in eliminating the disease. Primary care providers must routinely screen their patients for vaccination status, as the prevalence remains high in our elderly and others at increased risk. Indeed, there is no excuse.

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A Laparoscopic Update

Bradley D. Wong MD*, Guest Editor

Henry Yokoyama asked me in late 1997 to write an article on laparoscopy. Hoping that our medical colleagues might be curious about what goes on in the inner sanctum of the operating rooms, I agreed. The articles that you'll be reading are a result of my pleas to my surgical colleagues and are included in this issue. Robb Ohtani was ambitious enough to gather the gynecologists together for their contributions which will be published in early 1999. I selected the group of general surgeons because of their expertise or special interest in their subject. I thank them all.

In the following articles, we'll be taking a look at some of the procedures that have been adapted to laparoscopy. I'm sure there will be some surprises for everyone. Even the general surgeon accustomed to performing laparoscopic colectomies may be unaware of the advances occurring in gynecology. For the non-surgeon, I hope that these articles will improve awareness of what conditions the laparoscopists can now treat.

First, we need a perspective. A study of laparoscopy's roots might be of interest to you. It is a fascinating story, replete with ingenuity, innovation, inspiration, and luck. Let us begin.

The events of the past 10 years have been a great surprise to me. No one could have anticipated how far laparoscopy would come. I am not embarrassed to admit that I was a disbeliever of its potential. In 1989, I recall reading the article by Drs. Eddie Reddick and Olsen in *Surgical Endoscopy* reporting their first cases of cholecystectomy done with the laparoscope. I was amused. Why would any sane surgeon struggle with a cumbersome, albeit new, method when the old way was so simple, safe, and reliable? At the Hawaiian Surgical Association meeting on the Big Island, I had to personally speak with Dr. Reddick and view his videotape of this new procedure before I was convinced. How ironic that now ninety-five percent or more of cholecystectomies are done laparoscopically. I had learned an important historical lesson.

In August of 1991, the first laparoscopic cholecystectomies were done in Honolulu. Seven of us (Virginia Pressler, Steve Nishida, Peter Halford, Werner Grebe, Kristine Gebrowsky, Mihae Yu, and myself) began at the Queen's Medical Center. Gene Robinson started at Pali Momi. I think I can speak for all in saying that those first cases were some of most challenging, satisfying, and stressful cases of our careers.

Many have called the advancements in laparoscopy in the early 1990's a revolutionary period in general surgery. Studying the history of laparoscopy, however, makes it clear and fascinating that most pioneers are merely the most recent on a timeline of innovators and each is interdependent on many others for his individual successes. Each advance was the endpoint of an accumulation of human invention and is really evolutionary. While one person may be credited with having been the first to have accomplished an act, more often than not, many had thought about doing it before him but lacked only another concept or instrument, ever so slight or simple.

Having never inserted a Veress needle into an abdomen, many of us implored our gynecology friends to show us how to do it. This needle allowed the abdomen to be inflated with carbon dioxide, creating a cathedral-like work space. Janos Veress, by the way, was a Hungarian physician who, in 1938, reported his invention of a spring loaded obturator that slipped beyond the sharp point of the needle, lessening the chance of perforating a viscus. He never anticipated that his needle would be used to our benefit in 1991; he devised it to drain ascites and pleural effusions and never suggested that it be used to insufflate air.

Kelling, a German, about 1900, was the first to use a (sharp) needle to instill room air into the abdomen, which he viewed with a cystoscope. No one thought much of this idea at the time. Perhaps this was because his subjects were dogs. Hans Christian Jacobaeus of Stockholm, Sweden was the first to report in 1910 on the use of laparoscopy and thoracoscopy in humans. He instilled air through the trocar. He felt that thoracoscopy held greater potential and pursued this in the treatment of tuberculosis, leaving further developments in laparoscopy to others. Eventually, endotracheal intubation would enable formal thoracotomy to overshadow thoracoscopy, until, of course, today, when thoracoscopy has regained some respect. That story is for another editor to tell.

Air, though abundant, was not easy to work with. It enabled combustion and tended to leak out of the trocars. Richard Zollikofer of Switzerland suggested carbon dioxide as the ideal gas. It was non-flammable and was quickly absorbed by the peritoneum. Not everyone listened to Richard. In 1933, C. Fervers in Germany used oxygen to insufflate the abdomen, which resulted in a flash explosion when cautery was used to lyse adhesions. The patient survived, but the use of oxygen as a method of pneumoperitoneum did not. Z.E. Stone of Kansas in 1924 described the use of a rubber gasket placed at the end of the trocar to reduce the air leak.

In 1991, we were using the Veress needle, carbon dioxide, and Dr. Stone's rubber gasket to insufflate our patients' abdominal cavities.

Once the abdomen was filled with carbon dioxide, a sharp pyramidal tipped obturator within a (hollow) trocar was blindly plunged through the linea alba. This daring act consistently confirmed my belief in the benevolence of the universe. B. H. Orndoff of Chicago in 1920, invented that horrendous instrument, whose sharpness simplified the insertion of the trocar but likewise increased the chance that bowel or aorta might be punctured. Orndoff used fluoroscopy as an aid to insertion. In later months, many of us would learn the open technique of trocar placement developed by H. M. Hasson whereby a blunt trocar was inserted under direct vision. Hasson thought of this method 20 years before, in 1970, and greatly reduced the degree of faith and the intensity of prayer required to begin the operation.

Through the 10 mm trocar, we inserted the tubular rod-lens scope, a marvel of optical engineering, which gave us a bright light and a

clear image. Life was not so simple before this.

The Ancients did not have the benefit of modern glass and metals technology. Writings from 400 BC to 1000 AD in Greece, Pompeii, Rome, Babylonia, and Baghdad described various primitive tubes and speculums used to exam the various orifices the human body. Getting a tube into those orifices was an accomplishment in and of itself, but seeing through that tube required that another set of engineering dilemmas be solved.

One needed light to see. Many instruments were devised using both natural and artificial light, directed through holes, flasks, lenses, and mirrors. Philipp Bozzini working in Frankfurt in the early 1800's, developed the first practical endoscope using a candle, mirrors, and different specula to view the urethra, bladder, rectum, and vagina. Medical conservatism, politics, and professional jealousy hindered its acceptance by his colleagues.

Up through the 1850's, subsequent scopes using similar principles were constructed by Segalas (in Paris), Fisher (in America), and Desormeaux (in Paris). All suffered from poor external lighting and a view limited by the narrowness of the tube-speculum.

The urologist Maximillian Nitze is often credited with inventing the first "modern" cystoscope. Nitze collaborated with both an optician and an instrument maker (Josef Leiter), producing a scope in 1880 whose lens system gave a wider field of vision and a magnified, non-inverted image.

His initial light source was a heated platinum wire, placed at the tip of the scope and cooled by water (easily done in the bladder). Putting the light source within the bladder was a great inspiration, but he apparently borrowed that idea from a dentist, Julius Brock, who 13 years before had used the platinum wire light to view the inside of the mouth.

About the same time, Thomas Edison, aided by Perspiration, had invented the incandescent bulb (in 1879). Leiter meanwhile feuded with Nitze, and they parted ways. In 1883, Newman in Scotland passed a miniaturized bulb into the bladder through a cystoscope. By 1887, both Nitze, a German, and Leiter, an Austrian, independently had connected the American's invention to the tip of a cystoscope. The scope that Nitze (and Leiter) created remained conceptually unchanged until the 1960's.

Though the Nitze scope was revolutionary, it still suffered from relatively poorly light transmission characteristics: the view was dim. Pressured by a urologist, James Gow, Professor Harold Hopkins, an Englishman, invented the rod-lens scope, a system mass produced in the 1960's by a German instrument maker named Karl Storz. For those uninformed internal medicine types, this man Storz is to surgical instruments what Levi Strauss was to pants.

In Nitze's scope, a series of lenses was placed within an air-filled tube. At each air/glass interface, light was reflected. Light absorbed by the interior of the metal tube was also lost. Both effects reduced the amount of light reaching the eyepiece. In a brilliant conceptual maneuver, Hopkins reversed the materials within the tube. In place of air spaces, he inserted solid glass rods, curved at their ends, and separated by narrow air pockets, creating in effect, air lenses. This arrangement exploited the phenomenon of internal reflection of light within a glass tube and, combined with the new technology of antireflective lens coatings, increased the light transmitted by a factor of 80. Our current scopes bear the name of "Hopkins."

We are still left with the major problem of getting enough light with which to see into the abdomen. The heat generated by an

incandescent bulb placed at the tip of a scope would be obviously damaging to tissues. Once again, enter Professor Hopkins.

In the 1940's, the decade before he developed the rod-lens system, Hopkins was stimulated by the gastroenterologists' need for a flexible scope to replace the rigid scopes of that era. He and a graduate student constructed a primitive short flexible tube which consisted of fine glass fibers, bundled and oriented to carry an optical image. They named it the "fiberscope." Hopkins moved on, directing his energies to the rod-lens scope, but from this primitive instrument came the next piece of the technical puzzle.

Basil Hirschowitz, a fellow in gastroenterology at the University of Michigan read of Hopkins' work, and collaborated with two physicists (Peters and Curtiss). They coated fine glass fibers with a glass of lower refractive index to exploit the phenomenon of internal reflection, and in 1957 built the first practical flexible gastroscope. The light source of these early scopes was still an incandescent bulb placed at the tip of the scope, but by 1963, a fiber optic cable, based upon the glass fiber concept of the flexible gastroscope, was carrying light from an external source. This was a "cold" light which eliminated the risk of heat injury to internal organs.

Over the next 15 years, Dr. Kurt Semm, a German gynecologist took the advances in scopes and light sources and performed a variety of gynecologic procedures endoscopically (adhesiolysis, ovarian biopsy, fimbriolysis, tubal sterilization, salpingectomy, oophorectomy, myomectomy). He was the first to perform an appendectomy, incidentally, of course, and to suture the bowel. To accomplish this he developed a number of instruments and concepts which we still use today: high frequency monopolar and bipolar coagulation, the automatic pressure regulating insufflator, the hook scissors, a uterine vacuum grasper, a tissue morcellator, the endoloop, the suction-irrigating tubing, endosuturing, and the "pelvitrainer," an apparatus to aid surgeons in developing the hand-eye coordination necessary for laparoscopic operations. He was prolific inventor.

In 1991, to complete our cholecystectomies, we were using the still relatively primitive tools developed by Semm and the gynecologists.

American surgeons, meanwhile were doing little to advance laparoscopy in the 1960's. "Culdoscopy" was devised by two Americans Decker and Cherry, and was the most popular technique up to the 1960's. This arcane and undignified procedure had the woman positioned on her hands and knees. The few laparoscopists performed only minor diagnostic procedures such as liver and organ biopsies, ascites drainage, and minor gynecologic procedures on the tubes and ovaries, mainly tubal ligations. Even with Semm and the Europeans pushing the laparoscopic envelope, the clumsiness of the laparoscopic instrumentation dissuaded most American surgeons from embracing the technique.

The accomplishments of Semm and his contemporaries are remarkable when one considers that they viewed the abdomen through the single eyepiece of a rigid scope. When the scope was moved to another angle, so had to move the surgeon's head. Any observer had also to look through an eyepiece physically connected to the surgeon's scope. A cumbersome articulated optical tube system was still being used by gynecologists as recently as 1991. For the surgeon to use two hands, the assistant had to hold the operating scope/eyepiece for him, while holding his own eyepiece merely to observe the procedure. He could not provide any operative assistance. This obviously limited the complexity of the procedures which could be performed.

Our generation of pioneers were waiting for the marvelous CCD.

You are undoubtedly familiar with the silicon charge-coupled device (CCD). Your home video camera uses it to capture a light image, converting it into electrical impulses, which are then recorded onto magnetic tape. The CCD was developed at Bell Laboratories in 1969, but it took grants from NASA to nurture its development into the compact and light weight camera we use today. The chip itself is smaller than a postage stamp. The first practical camera was marketed by Circon in 1985. Its resolution is not as great as the cameras now on board the Galileo space probe (to Jupiter) or the Hubble telescope or the Cassini probe (to Saturn), but it uses the same technology. The arthroscopists were quick to exploit its potential and were the first to use the technology here in Hawaii.

The CCD camera sits atop the eyepiece of the laparoscope. It is about 7-10 cm long and connects by a cord to a video processor which transmits the image to a familiar black box, the TV monitor (now that is a fascinating story and an important part of the puzzle as well). We now had a large, clear, bright, color image which could be viewed by many observers. This video-imaging system freed the surgeon to use 2 hands to operate and enabled assistants to participate actively in the operation.

By 1987, the first cholecystectomies in humans were performed using the CCD-TV systems, first in France and then in the United States. In early 1991, Eddie Reddick in Nashville was teaching his technique to a small group of Hawaii surgeons. He normally charged \$3,000 dollars to take his course. He offered it to us for free. Dr. Reddick had been a surgical resident at Tripler and most of us had been his instructors. The student had now surpassed the teachers.

Our first laparoscopic cholecystectomy adventures were made possible by the cumulative daring and ingenuity of the many inventors before us. Soon we became familiar with the instrumentation. Laparoscopic cholecystectomy became routine. A few gynecologists confided to me that the general surgeons' success stimulated them to perform more complex procedures. It was inevitable that appendectomy and inguinal herniorrhaphy would be adapted to the laparoscope.

It has been an intoxicating ride. As I look back upon our first entry into laparoscopic surgery in August of 1991, I find it hard to recall how difficult it seemed then. As you will see in the forthcoming articles, technical advances have made more difficult operations feasible (colectomy, splenectomy, adrenalectomy, fundoplication, nephrectomy, and others) and have simultaneously raised issues of cost, safety, and efficacy. What lies ahead? If I've learned anything from the past seven years, it is that the unimaginable will become possible. History teaches us that the horizon is never fixed.

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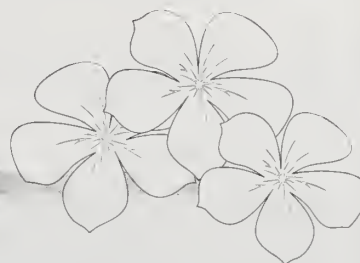
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Laparoscopic Ultrasound: A Valuable Adjunct to Laparoscopic Surgery

Junji Machi MD, PhD

Laparoscopic ultrasound represents a recent merger in the laparoscopic technology and intraoperative ultrasound and shows a diagnostic accuracy higher than preoperative studies. Laparoscopic ultrasound can be used during laparoscopic cholecystectomy to screen the bile duct. It is particularly useful for diagnosing and staging malignancies, including hepatobiliary, pancreatic and gastroesophageal cancers. By demonstrating the interior of organs and deep structures, it can compensate for the limitation of laparoscopic examination. Laparoscopic ultrasound will become a valuable adjunct to laparoscopic surgery.

Laparoscopic surgery has a number of advantages including minimal invasiveness or operative trauma, less pain, quicker recovery and return to normal activity, and shorter hospitalization. In comparison to conventional open surgery, however, laparoscopic procedures possess certain disadvantages such as lack of binocular vision and restricted freedom of instrument movement. A major limitation is the lack of sufficient tactile feedback from the tissues. During laparoscopic surgery, surgeons are unable to palpate organs directly. Intraoperative examinations of deep tissues or retroperitoneal structures are difficult or impossible. These limitations of laparoscopy may result in decreased accuracy in intraoperative examination and increased operating time.

Intraoperative ultrasound, the use of ultrasound during open surgery, has proven invaluable during various abdominal operations.¹⁻³ The main advantage of intraoperative ultrasound is the high diagnostic accuracy due to high-frequency, high-resolution instruments employed. For example, the accuracy of intraoperative ultrasound is equal to or superior to intraoperative cholangiography in screening bile duct calculi during open cholecystectomy. It is the most accurate method for detecting liver metastases or localizing islet cell tumors, exceeding the sensitivity of intraoperative inspection and palpation by surgeons. The stage and resectability of hepatobiliary, pancreatic or other abdominal cancers can be determined more precisely than by preoperative tests. Thus, intraoperative ultrasound helps surgical decision-making, and occasionally alters planned surgical procedures. In addition, with its guidance capability, intraoperative ultrasound enables procedures such as needle biopsy of nonpalpable tumors or facilitates hepatic resection or ablative treatment of tumors.

Laparoscopic ultrasound (LUS) is one form of intraoperative ultrasound that represents a merger in the laparoscopic and intraoperative ultrasound technologies. LUS utilizes the same high-frequency instruments that provide high-resolution images. This ultrasound technique allows surgeons to visualize the interior of organs and deep structures, thereby compensating for the limitation of laparoscopic examination. With increasing number of laparoscopic procedures being performed, the application of LUS to laparoscopic surgery is a logical extension of intraoperative ultrasound.

History

LUS using A-mode (one-dimensional) ultrasound was first attempted by Japanese investigators in the 1960s, for the diagnosis of gallstones or liver tumors. In the early to mid-1980s, several prototype LUS probes using B-mode (two-dimensional) ultrasound were developed in Japan and Europe.⁴⁻⁶ In spite of excellent images obtained by these prototype probes, LUS was not widely accepted in the 1980s, mainly because of declined interest in diagnostic laparoscopy among surgeons. However, shortly after the explosion of laparoscopic surgery with a video laparoscope, interest in LUS was rekindled in the early 1990s. Initially, LUS was introduced during laparoscopic cholecystectomy to screen the bile duct. Subsequently, LUS was performed for staging of abdominal malignancies and for diagnosing hepatic or pancreatic lesions. During the last several years, numerous experiences with LUS have been reported.

Instruments

Current LUS instruments employ a high-frequency (5 to 10 MHz) real-time B-mode ultrasound system, which is basically the same as

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Fig 1.—Flexible laparoscopic ultrasound probe with side-viewing linear-array transducers, which are electronically interchangeable from 5 to 7 to 8 MHz.

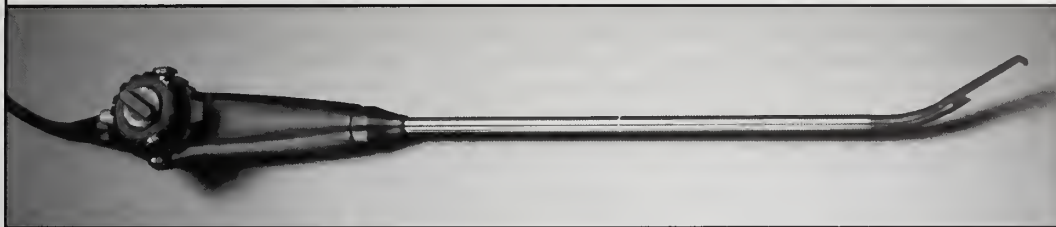


Fig 2.—Multiple small calculi (arrowheads) were detected in the intrapancreatic portion of the bile duct (BD) by laparoscopic ultrasound during laparoscopic cholecystectomy. P = pancreas, S = acoustic shadow of calculi.

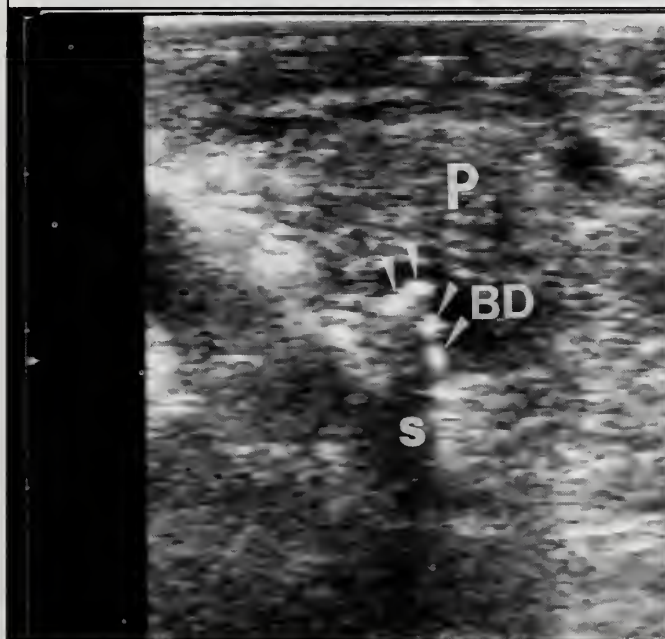
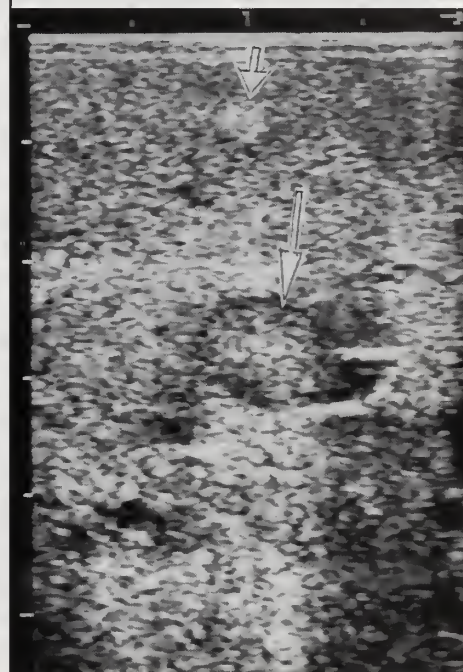


Fig 3.—Invisible metastatic tumors (arrow), 5mm and 12mm in size, were detected in the right lobe of the liver by laparoscopic ultrasound during exploratory laparoscopy for a pancreatic cancer.



intraoperative ultrasound.^{1,2} Certain systems have a capability of duplex ultrasound (B-mode plus Doppler spectrum) or color Doppler imaging (display of blood flow in color on B-mode images), which facilitates quicker identification of blood vessels. A probe consists of transducers mounted on or near the tip of a slender shaft. It is usually 10mm in diameter and 40 to 70cm in length, and is introduced into the peritoneal cavity via a 10mm trocar, after cold gas sterilization. Several types of LUS system-probes are presently available. A system provides linear-array (producing rectangular images), convex or sector (producing pie- or fan-shaped images) transducers. A probe can be either front-viewing (scanning plane parallel to the probe shaft) or side-viewing (scanning plane at the right angle with the shaft). A front-viewing sector probe is suitable for scanning of the extrahepatic bile duct or the pancreas whereas a side-viewing convex or linear-array probe is essential for scanning of the liver. A rigid-shaft probe was originally made by manufacturers; currently, a flexible probe is also available. This has a flexible tip that is mobile in two or four directions (Figure 1). Although

technically more demanding, a flexible probe facilitates scanning of areas that are difficult to delineate with a rigid probe (e.g., behind the dome of the liver), reduces the number of trocar insertion sites, and decreases the scanning time.

Clinical Applications

It is easily understandable that after rapid widespread performance of laparoscopic cholecystectomy in the early 1990s LUS was first introduced for examination of the biliary tract. Initial experiences demonstrated the technical feasibility of LUS to delineate the biliary anatomy and to detect bile duct calculi.⁷⁻¹⁰ Since then, several prospective trials have compared LUS with intraoperative cholangiography (that is a current standard) during laparoscopic cholecystectomy.¹¹⁻¹⁵ LUS, once learned, required less time than intraoperative cholangiography (5 to 10 minutes versus 10 to 15 minutes). The accuracies (sensitivity and specificity) of both tests in diagnosing bile duct calculi showed no significant difference (Figure 2). An anatomic definition of the biliary tract (e.g., detection of bile duct

Fig 4.— Laparoscopic radiofrequency thermal ablation of a liver tumor guided and monitored by laparoscopic ultrasound. The tumor was detected in the lateral segment by preoperative computed tomography, but was not visible during laparoscopy. **Left:** The tumor was localized near the posterior surface of the liver, and a cannula (arrow) was inserted in the center of the tumor. S = stomach, arrowhead = a nasogastric tube. **Center:** During radiofrequency thermal ablation, ablated areas became hyperechoic due to outgassing. A radiofrequency artifact was also seen. Arrow = a shaft of the cannula. **Right:** After completion of thermal ablation. Arrowheads indicate ablated areas. Arrow = remaining gasses in the center of ablated areas.



anomalies) was slightly better provided by intraoperative cholangiography, while the surrounding structures such as the hepatic artery and portal vein were imaged only by LUS. Overall, LUS and intraoperative cholangiography are considered complementary to each other. Because of its safety and quickness, LUS can be the first-choice method for screening bile duct calculi; intraoperative cholangiography can be used selectively when LUS is incomplete or inconclusive or when the biliary anatomy needs to be clearly defined (e.g., suspicion of bile duct anomaly).

Laparoscopic exploration provides diagnostic information not obtainable by preoperative studies, and is considered an effective modality for diagnosing and staging abdominal malignancies. In many recent studies, laparoscopy has been shown to more correctly predict resectability of malignancies including hepatobiliary, pancreatic, and gastrointestinal cancers, and thereby to decrease remarkably the incidence of unnecessary laparotomy for unresectable cancers. Because of the known limitation of diagnostic laparoscopy, LUS has been lately introduced as an adjunct to laparoscopy for various abdominal malignancies. LUS provides surgeons with information that cannot be obtained by laparoscopic exploration alone. LUS can detect lesions located deeply in an organ such as the liver and pancreas; for example, invisible metastatic liver tumors can be diagnosed (Figure 3). Tumor invasion into surrounding structures, mainly major blood vessels, can be evaluated. Prior to extensive tissue dissection, LUS can identify enlarged or suspicious lymph nodes; this is difficult with laparoscopic visual examination alone. The information regarding cancer spread provided by LUS is similar to that by intraoperative ultrasound during open surgery. Several studies reported during the last few years demonstrated that

LUS provided staging information in addition to that derived from laparoscopy alone in 10 to 40% of patients with liver, biliary, pancreatic and gastroesophageal cancers.¹⁶⁻²² In these studies, because of better LUS staging the predicted resectability was higher than 90 to 95%, confirmed by subsequent laparotomy.

There are a number of other applications suggested by recent reports of LUS during laparoscopic exploration or laparoscopic surgery. These include evaluation of gallbladder polyps, detection or definition of pancreatic pseudocysts, localization of pancreatic islet cell tumors, assistance during surgery of liver cysts, assistance during adrenal tumor resection, and evaluation of retroperitoneal tumors.

Intraoperative ultrasound has been used for guidance of various surgical procedures such as needle, cannula or probe placement and tissue dissection or resection. Such guidance techniques (so-called interventional ultrasound) can be used with LUS. LUS can guide a needle into target lesions for biopsy of tumors (e.g., liver or pancreatic tumors) or lymph nodes and for aspiration of cystic lesions. Non-resectional treatment of liver tumors such as laparoscopic cryoablation or thermal ablation that has been developed recently cannot be completed without LUS.²³⁻²⁵ In these procedures, cannula or probe placement is guided by LUS, and the treatment process is monitored by LUS images (Figure 4). LUS-guided laparoscopic resection of tumors (e.g., partial hepatic resection) has been reported.

Perspective

Although technically more demanding than intraoperative ultrasound during open surgery, LUS, when appropriately performed,

can provide versatile information and compensate for the limitation of laparoscopy. During laparoscopic cholecystectomy, LUS can be used as complement or alternative to intraoperative cholangiography: By using LUS as a first-choice screening method, the requirement for intraoperative cholangiography will be significantly reduced. During exploratory laparoscopy immediately prior to planned laparotomy for abdominal malignancies, in particular liver and pancreatic cancers, LUS can extend the diagnostic staging ability of laparoscopic surgeons, and thus can eliminate the need for laparotomy in many patients with unresectable cancers. In selected patients with liver tumors who are not candidates for surgical resection, laparoscopic ablation treatment with LUS guidance can be offered. At present, laparoscopic cancer surgery (e.g., laparoscopic colectomy for colon cancer) is being investigated by clinical trials. Once patients undergo laparoscopic resection of primary abdominal cancers, LUS will have a role, especially in examining the liver for metastasis.

Laparoscopic technology continues to advance rapidly, and laparoscopic surgery continues to apply to the larger numbers and various types of abdominal diseases. As well, ultrasound technology is advancing, e.g., 3-dimensional ultrasound and ultrasound contrast enhancement; such a technology may soon be introduced to intraoperative ultrasound, and possesses a variety of potentials. As technology is evolving and its applications are expanding in both laparoscopy and ultrasound, LUS as a new modality must be assessed carefully to better define its role (and also its limitation) in improving laparoscopic operations and patient outcome. LUS, when appropriately utilized, will show great promise as a valuable adjunct to laparoscopic surgery.

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Laparoscopic Inguinal Herniorrhaphy: The New Gold Standard of Hernia Repair?

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The surgical treatment of the common inguinal hernia has been one of the most analyzed and debated topics in medicine. Recently, with the success of laparoscopic cholecystectomy, interest in minimally invasive surgical techniques has led to its application for inguinal hernia repair. Current laparoscopic herniorrhaphies are based on the principles of conventional open preperitoneal repairs and are classified into two types: 1) transabdominal preperitoneal repair (TAPP) and 2) totally extraperitoneal repair (TEP). Common advantages to both techniques include a decrease in postoperative pain,¹ earlier return to normal activity,² and improved cosmesis. Both laparoscopic techniques have the disadvantage of requiring general or regional anesthesia and increased procedural costs.² Lastly, there is a concern that laparoscopic hernia repair has not been around long enough to know the risk of late recurrences. Laparoscopic herniorrhaphy, however, is a viable alternative to standard open inguinal hernia repair.

Introduction

Surgical treatment of the common inguinal hernia has been one of the most analyzed and debated topics in medicine. Since the earliest inguinal hernia repair described by Celsus in 50 AD to the inception of the "modern" surgical treatment of inguinal hernias in the 19th century, hundreds of different repair techniques have been described and nearly 20 different repairs are currently in use. Furthermore, it is one of the most commonly performed surgical procedures with over half a million patients a year undergoing inguinal herniorrhaphy in the United States alone. Yet despite the long and storied history of inguinal herniorrhaphy and the abundance of clinical data, no single operation has emerged as the operation of choice. In fact,

no operation in general surgery has undergone more modifications or is performed in more varying techniques than the routine inguinal repair. Until recently, however, whichever technique was used, the only way to repair an inguinal hernia, was through a relatively large incision on the abdomen. This has the major disadvantages of significant postoperative pain and prolonged disability not only due to the incision itself, but also due to the necessity of having to mobilize the cord structures and nerves in order to repair the inguinal floor. This is especially true for bilateral hernias which require incisions and dissection in both groins or recurrent hernias which require operating through the previous scar.

Recently, with the success of laparoscopic cholecystectomy, an explosion in the application of minimally invasive techniques for general surgical procedures has developed. Much of the incentive to develop these new minimally invasive techniques have been driven by patient demand, spurred on by the lay press and the Internet. Hospitals are also touting the benefits of minimally invasive surgery as a way of attracting more patients. Included in this wave of new applications are minimally invasive techniques to repair the common inguinal hernia.

Current Laparoscopic Herniorrhaphies

The first description of a laparoscopic hernia repair was in 1989 by Ger who reported a simple ligation of the hernia sac along with closure of the fascial defect. Subsequent methods included simple mesh plugs placed in the internal ring to occlude the hernia defect or intraperitoneal onlay patches to cover the defect. These early attempts at laparoscopic repair were associated with high recurrence rates or other complications and have since been abandoned. Current laparoscopic herniorrhaphies are based on the principles of conventional open preperitoneal repairs and can be classified into two types: 1) transabdominal preperitoneal repair (TAPP) and 2) the totally extraperitoneal repair (TEP). Both techniques have their advantages and disadvantages. Common advantages to both techniques include a decrease in postoperative pain,³ earlier return to normal activity, and improved cosmesis. However, unlike traditional open herniorrhaphy which can be performed under local anesthesia with sedation, both laparoscopic techniques have the disadvantage of requiring general or regional anesthesia. In addition, laparoscopic repairs are more expensive due to the need for disposable instruments, trocars and video equipment.² Lastly, many surgeons claim that neither type of laparoscopic hernia repair has been around long enough to know the risk of late recurrences.

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Pseudomembranous colitis has been reported with nearly all antibacterial agents, including erythromycin, and may range in severity from mild to life-threatening. Therefore, it is important to consider this diagnosis in patients who present with diarrhea subsequent to the administration of antibacterial agents.

Treatment with antibacterial agents alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of "antibiotic-associated colitis."

After the diagnosis of pseudomembranous colitis has been established, therapeutic measures should be initiated. Mild cases of pseudomembranous colitis usually respond to drug discontinuation alone. In moderate to severe cases, consideration should be given to management with fluids and electrolytes, protein supplementation and treatment with an antibacterial drug clinically effective against *C. difficile* colitis.

PRECAUTIONS

General: For topical use only, not for ophthalmic use. Concomitant topical acne therapy should be used with caution because a possible cumulative irritancy effect may occur, especially with the use of peeling, desquamating or abrasive agents. If severe irritation develops, discontinue use and institute appropriate therapy.

The use of antibiotic agents may be associated with the overgrowth of nonsusceptible organisms including fungi. If this occurs, discontinue use and take appropriate measures.

Avoid contact with eyes and all mucous membranes.

Information for Patients: Patients using BENZAMYCIN® Topical Gel should receive the following information and instructions:

1. This medication is to be used as directed by the physician. It is for external use only. Avoid contact with the eyes, nose, mouth, and all mucous membranes.

2. This medication should not be used for any disorder other than that for which it was prescribed.

3. Patients should not use any other topical acne preparation unless otherwise directed by physician.

4. Patients should report to their physician any signs of local adverse reactions.

5. BENZAMYCIN® Topical Gel may bleach hair or colored fabric.

6. Keep product refrigerated and discard after 3 months.

CARCINOGENESIS, MUTAGENESIS AND IMPAIRMENT OF FERTILITY

Data from a study using mice known to be highly susceptible to cancer suggests that benzoyl peroxide acts as a tumor promoter. The clinical significance of this is unknown.

No animal studies have been performed to evaluate the carcinogenic and mutagenic potential or effects on fertility of topical erythromycin. However, long-term (2-year) oral studies in rats with erythromycin ethylsuccinate and erythromycin base did not provide evidence of tumorigenicity. There was no apparent effect on male or female fertility in rats fed erythromycin (base) at levels up to 0.25% of diet.

Pregnancy, Teratogenic Effects: Pregnancy CATEGORY C: Animal reproduction studies have not been conducted with

BENZAMYCIN® Topical Gel or benzoyl peroxide.

There was no evidence of teratogenicity or any other adverse effect on reproduction in female rats fed erythromycin base (up to 0.25% diet) prior to and during mating, during gestation and through weaning of two successive litters.

There are no well-controlled trials in pregnant women with BENZAMYCIN® Topical Gel. It also is not known whether BENZAMYCIN® Topical Gel can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. BENZAMYCIN® Topical Gel should be given to a pregnant woman only if clearly needed.

Nursing Women: It is not known whether BENZAMYCIN® Topical Gel is excreted in human milk after topical application.

However, erythromycin is excreted in human milk following oral and parenteral erythromycin administration. Therefore, caution should be exercised when erythromycin is administered to a nursing woman.

Pediatric Use: Safety and effectiveness of this product in pediatric patients below the age of 12 have not been established.

ADVERSE REACTIONS

In controlled clinical trials, the total incidence of adverse reactions associated with the use of BENZAMYCIN® Topical Gel was approximately 3%. These were dryness and urticarial reaction.

The following additional local adverse reactions have been reported occasionally: irritation of the skin including peeling, itching, burning sensation, erythema, inflammation of the face, eyes and nose, and irritation of the eyes. Skin discoloration, oiliness and tenderness of the skin have also been reported.

DOSAGE AND ADMINISTRATION

BENZAMYCIN® Topical Gel should be applied twice daily, morning and evening, or as directed by a physician, to affected areas after the skin is thoroughly washed, rinsed with warm water and gently patted dry.

How Supplied and Compounding Directions:

Size (Net Weight)	NDC 0066	Benzoyl Peroxide Gel	Active Erythromycin Powder (in Plastic Vial)	Ethyl Alcohol (70%) To Be Added
11.65 grams (as dispensed) SAMPLE	0510-05	10 grams	0.4 grams	1.5 mL
23.3 grams (as dispensed)	0510-23	20 grams	0.8 grams	3 mL
46.6 grams (as dispensed)	0510-46	40 grams	1.6 grams	6 mL

Prior to dispensing, tap vial until powder flows freely. Add indicated amount of ethyl alcohol (70%) to vial (to the mark) and immediately shake to completely dissolve erythromycin. Add this solution to gel and stir until homogeneous in appearance (1 to 1½ minutes). BENZAMYCIN® Topical Gel should then be stored under refrigeration. Do not freeze. Place a 3-month expiration date on the label.

NOTE: Prior to reconstitution, store at room temperature between 15° and 30°C (59° - 86°F).

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Transabdominal Preperitoneal Repair (TAPP)

Currently, the most popular laparoscopic technique is the TAPP repair. The procedure is performed intra-abdominally, placing a 10 mm laparoscope into the abdomen. The peritoneum just anterior to the internal ring is incised and the peritoneal surface is dissected off the abdominal wall. The pertinent anatomy is carefully exposed and a large panel of synthetic mesh is placed on the anterior abdominal wall and tacked in place to cover the hernia defects. The peritoneum is then closed over the mesh to completely cover it and separate the mesh from the intraperitoneal contents. The major advantages of the TAPP approach are that the contralateral side can easily be examined at the time of a unilateral repair and the working space is much larger, making it the easiest of the two laparoscopic repairs. The main disadvantage is that the operation is performed completely intraperitoneally, potentially exposing the intra-abdominal contents to the risks of any abdominal surgery including vascular and intestinal trocar injuries, postoperative bowel obstruction and trocar site herniation.

Totally Extraperitoneal Repair (TEP)

Although this approach is technically the most difficult, it is perhaps the most satisfying of all laparoscopic hernia repairs developed thus far. The operation is performed according to techniques that have proven effective in open surgery. No compromises in technique are made to accomplish this repair laparoscopically. The procedure is performed by first creating a totally extraperitoneal working space using an air or water filled balloon to dissect the peritoneum off the abdominal wall and create a preperitoneal space. Once this space is created, a pneumo-preperitoneum is established using CO₂ gas insufflation. From this point, the operation is performed in a similar manner to the TAPP repair. The appropriate structures are identified and again a large panel of synthetic mesh is tacked into place to completely cover and reinforce the inguinal floor. Despite being the most difficult of all laparoscopic hernia repairs because of the limitation of a small working space in the preperitoneum, this operation is gaining popularity and may become the laparoscopic repair of choice. The TEP repair offers the same advantages as the TAPP repair but because it is performed totally extraperitoneally, it minimizes the risk of intra-abdominal complications. Furthermore, much of the hernia dissection is performed by the balloon during the creation of the preperitoneal space, saving operative time and simplifying the identification of the anatomy.

Indications and Patient Selection

The first and most important criteria is that the patient be a suitable candidate for general anesthesia. Unlike open hernia repairs, laparoscopic repairs cannot be performed using local anesthesia. Although laparoscopic herniorrhaphy has been performed using regional anesthesia, most surgeons feel that additional abdominal relaxation obtained with general anesthesia is important and routinely require it for this approach. Beyond the requirement that patients be suitable medical candidates for general anesthesia, selection of patients suitable for a laparoscopic approach is a subject of controversy. The benefits of decreased postoperative pain and earlier return to activity are greatest in patients who undergo simultaneous laparoscopic repair of bilateral hernias or those who have recurrent hernias. Patients with bilateral hernias benefit because instead of the large incision in each groin necessary for open repair, both hernias can be repaired laparoscopically through the same small incisions with minimal in-

crease in postoperative pain. Furthermore, patients who have recurrent unilateral or bilateral inguinal hernias, also benefit because the laparoscopic approach avoids having to operate through scar from the previous surgery. Also, patients whose occupation or lifestyle require returning to full activity as soon as possible can also benefit from laparoscopic herniorrhaphy. Unlike open repair which leads to a 3-6 week period of disability, most surgeons allow patients to resume normal activity as soon as they feel able to. Typically, most return to normal activity within a week, although many highly motivated individuals return to strenuous physical activity in 2-3 days following surgery.

Results

Both retrospective reviews and randomized, prospective trials have demonstrated the benefit of decreased postoperative pain and earlier return to normal activity for laparoscopic repair as compared to "tension free" open hernia repair.^{1,2,4} Postoperative pain has been significantly less and most studies have documented that patients are more comfortable and need less analgesia postoperatively. Patients return to work sooner, and this is especially true for those patients who must return to a physically strenuous job. The incidence of recurrence compares favorably to open hernia repairs and ranges from 0.3-5.0% for TAPP repairs and 0 - 8% for TEP repairs.^{5,6} The most common reasons for recurrences have been technical problems with placement of the mesh or missing a second hernia by not completely dissecting the direct and indirect spaces. Most reports demonstrate that the incidence of recurrence decreases as surgeons gain experience with this approach. Also, not surprisingly, large hernias, bilateral hernias and complex hernias have been associated with the highest risk of recurrences and likewise, these hernias are

best performed by surgeons experienced with the procedure.⁷ Additional complications specific to the laparoscopic approach have been a small incidence of nerve entrapment syndromes resulting in chronic pain, trocar site hernias, and a slightly higher incidence of seromas. Lastly, the TAPP approach is associated with a 0.2% incidence of small bowel obstruction usually due to adhesions at the operative site.

Conclusions

Laparoscopic herniorrhaphy is a viable alternative to standard open inguinal hernia repair. It is associated with less postoperative pain and a quicker return to normal activity. It has recurrence rates comparable to standard open repair and can be performed with low morbidity. For patients with bilateral or recurrent inguinal hernias or those who need to return to activity quickly, laparoscopic herniorrhaphy may be the procedure of choice.

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Laparoscopic Staging of Malignant Disease

John H. Payne, Jr., MD, F.A.C.S.

The earliest applications of laparoscopy were for diagnostic procedures. The goal was to make a diagnosis while sparing the patient a major, and often futile, operation. However, the view was limited and it was not possible to palpate organs or masses. The recent development of advanced laparoscopic techniques and ultrasound have improved our view and restored our "sense of touch". These innovations bring the goal of minimally invasive diagnosis and staging closer to reality. This paper reviews the current literature on the laparoscopic staging of cancer with an emphasis on patient selection, diagnostic accuracy, and the reduction in morbidity which can be achieved.

Introduction

Over the last decade therapeutic laparoscopy has undergone an explosive growth. Early success with laparoscopic cholecystectomy has encouraged innovative surgeons to apply minimal access techniques to a growing list of procedures. It has also led us to return to our historic roots. Before the advent of the CCD camera and the increasingly sophisticated instruments, laparoscopy was used primarily for diagnosis. Inspection of the viscera and biopsy of abnormal tissue were the primary goals.

Diagnostic laparoscopy was introduced by Ott, a Russian gynecologist, in 1903¹ and by Kelling.² A few years later, the concept of the pneumoperitoneum was formulated and the word "laparoscopy" coined by Jacobaeus.³ He also described the diagnosis of cirrhosis, metastatic disease, and tuberculous peritonitis. As part of the worldwide effort to "stage" malignant diseases, Benedict was among the first to discover that gastric, colonic, and ovarian malignancies could produce ascites.⁴

The development of a standardized system of staging malignant disease paralleled the progress in diagnostic laparoscopy. The early work of Pierre Denoit⁵ in the 1940s was formalized in the 1980s when the International Union Against Cancer (UICC) and the American Joint Committee on Cancer (AJCC) adopted the TNM (Tumor, Nodes, Metastases) system.⁶

Diagnostic laparoscopy can be complementary to other modalities and detect lesions beyond the resolution of other imaging methods. Its use to improve the staging and to allow the palliative treatment of advanced disease is becoming even more common.

Patient Selection and Techniques

Since general anesthesia and a pneumoperitoneum are generally required to optimize diagnostic laparoscopy, it is important to thoroughly evaluate the patient's cardiac and pulmonary system. In elderly patients with compromised function, monitoring end-tidal CO₂ will be necessary to prevent respiratory acidosis. The decreased venous return which a pneumoperitoneum and the reverse Trendelenberg position can produce makes the accurate assessment of intravascular volume critical. Sequential compression stockings, a Foley catheter, and a beanbag to support the patient during frequent position changes are even more important in this high-risk group.

Alternate access techniques may be necessary if the patient has had prior surgery or if there are masses or ascites present. The first step is a thorough inspection of the entire peritoneal cavity. This may detect small serosal implants which have eluded preoperative imaging. Relatively advanced laparoscopic skills are required. The surgeon must be comfortable entering the lesser sac or the retroperitoneum and obtaining tissue by biopsy or nodal dissection. Intraoperative ultrasound may compensate for the inability to palpate structures during laparoscopy. Collaboration with a trained ultrasonographer will make this a much more rewarding effort. Changing the patient's position will facilitate these procedures.

Staging Gastrointestinal Malignancies

There is ample evidence to suggest that the sensitivity and specificity of diagnostic laparoscopy can rival, and perhaps, surpass that of the usual preoperative imaging methods.⁷⁻¹¹ When coupled with intraoperative ultrasound, this advantage may even be greater. Since neither chemo nor radiation therapy can provide significant long-term survival for patients with extensive metastatic disease, avoiding unnecessary open explorations and permitting less morbid palliative procedures are important goals in the care of cancer patients. However, the procedure is not without risk. It should only be used in those cases where the potential diagnostic gain outweighs any risk.

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Tumors of the Esophagus and Cardia

The current staging of these tumors is aimed at assessing the depth of wall penetration, lymphatic spread, and systemic metastases.¹² If paraesophageal nodal disease is present, five-year survival for most patients with esophageal carcinomas is unlikely. Early detection and careful staging can minimize the frequency of futile resections while identifying those who might benefit from aggressive treatment. Only accurate tumor staging allows an adequate selection of appropriate treatment and a correct assessment of the response to preoperative therapy. Both endoscopic ultrasound and diagnostic laparoscopy can contribute to this precision. Stein, et al¹³ recently reported a prospective study of 127 patients with no evidence of metastatic disease referred for surgery or multimodal therapy. Diagnostic laparoscopy with peritoneal lavage was performed in each case. Because of technical problems with the probe, a complete laparoscopic ultrasound examination was completed in only 88 of the 127 patients. Forty-four relevant new findings were noted in 31 (24.4%) patients. Sixteen unsuspected liver metastases were found. Fourteen of these were only found by laparoscopic ultrasound. The sensitivity and specificity of laparoscopic ultrasound, percutaneous ultrasound, and CT in evaluating celiac axis lymph nodes are shown in Table 1.

Tumors of the Stomach

Although declining in incidence, gastric cancer remains a common problem. Since most patients present with advanced disease, it is still a major cause of cancer deaths. Resections for "cure" are undertaken in less than 60%. At celiotomy, more than 25% will be found to have been understaged by preoperative imaging.¹⁴ Since standard adjuvant chemotherapy has done little to improve survival, there is a growing interest in neo-adjuvant (treatment given prior to surgery) protocols for these patients. For this approach to be successful, the patients must be accurately staged prior to their treatment. Diagnostic laparoscopy might be very useful for those with apparently resectable disease.

In a recent series from Spain,¹⁵ 76 patients with presumably resectable cancers underwent diagnostic laparoscopy with intraoperative laparoscopic ultrasound. Thereafter, twenty-nine (40.8%) were found to be unresectable. The main reasons were peritoneal metastases in 16, malignant ascites in 15, liver metastases in 12, Krukenberg tumor in 2, and retroperitoneal fixation in 8. The other 42 patients were judged resectable. Only one of those was found to be unresectable at celiotomy. Consequently, the diagnostic accuracy of laparoscopy in determining resectability was 98.6% (70 of 71 patients). The sensitivity and specificity as confirmed by histology or celiotomy are shown in Table 2.

Results such as these have led to a wider application of diagnostic laparoscopy to select patients more precisely for neoadjuvant therapy and "curative" resection of gastric cancer.¹⁶

Pancreatobiliary Cancer

Primary pancreatobiliary carcinoma is an ideal opportunity for diagnostic laparoscopy. Despite the continuous development of noninvasive imaging techniques, a large number are found to have unsuspected metastatic disease at the time of exploration.¹⁷ Lavage studies indicate that as many as 40% of patients with pancreatic carcinoma already have diffuse peritoneal disease at the time of

Table 1.—The sensitivity and specificity of ultrasound and CT in evaluating nodes in the celiac plexus. Stein, 1997¹³

	Sensitivity ("True Positive")	Specificity ("True Negative")
Laparoscopic Ultrasound	67%	92%
Percutaneous Ultrasound	35%	78%
Computed Tomography	47%	82%

Table 2.—Multicenter comparison of video-laparoscopic staging of gastric cancer. Ascencio, 1997¹⁵

	Sensitivity ("True Positive")	Specificity ("True Negative")
Serosal infiltration	77%	100%
Lymph node metastases	62.5%	100%
Liver metastases	100%	100%
Peritoneal metastases	89%	100%
Retroperitoneal infiltration	57%	100%
Ascites	100%	100%

Table 3.—Laparoscopic staging of pancreatic cancer. Pietrabissa, 1996²³

Standard Imaging	Findings at Laparoscopy	Surgical Outcome
25 suspected pancreatic carcinomas - believed to be resectable	9 unresectable	3 pancreatectomies with vascular resection
	3 with locally advanced disease and/or portal vein encasement	
	2 change of diagnosis	10 standard pancreatic resections
	9 confined tumors	1 exploration alone

presentation.¹⁸ Early detection of disseminated disease may avoid unnecessary exploration in nearly a third of the patients sent for surgery¹⁹⁻²¹ and permit laparoscopic an/or endoscopic palliation.

Visual laparoscopy alone is inadequate to thoroughly evaluate the pancreas or the biliary tract for evidence of locally unresectable or distant disease. The addition of contact ultrasound has proven its worth in open surgery.²² The addition of biopsy guides to laparoscopic ultrasound probes will facilitate sampling from the pancreas and the retroperitoneum.

Pietrabissa, et al²³ recently published their experience with 25 patients with suspected pancreatic cancer referred for surgery. Preoperative staging to select those suitable for surgical referral was accomplished with ultrasound; dynamic, contrast enhanced CT; selective visceral angiography; and ERCP. Ascites or peritoneal washings were sent for cytology at the beginning of each case. Visual inspection of the peritoneum and liver followed. Attention was then turned to the ligament of Treitz and the base of the mesentery. Laparoscopic access to the lesser sac permitted direct



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The antimicrobial action may be attributable to inhibition of microbial cellular protein synthesis. A normalization of keratinization leading to an anticomedonal effect of azelaic acid may also contribute to its clinical activity. Electron microscopic and immunohistochemical evaluation of skin biopsies from human subjects treated with AZELEX[®] demonstrated a reduction in the thickness of the stratum corneum, a reduction in number and size of keratohyalin granules, and a reduction in the amount and distribution of filaggrin (a protein component of keratohyalin) in epidermal layers. This is suggestive of the ability to decrease microcomedo formation. **Pharmacokinetics:** Following a single application of AZELEX[®] to human skin *in vitro*, azelaic acid penetrates into the stratum corneum (approximately 3 to 5% of the applied dose) and other viable skin layers (up to 10% of the dose is found in the epidermis and dermis). Negligible cutaneous metabolism occurs after topical application. Approximately 4% of the topically applied azelaic acid is systemically absorbed. Azelaic acid is mainly excreted unchanged in the urine but undergoes some β -oxidation to shorter chain dicarboxylic acids. The observed half-lives in healthy subjects are approximately 45 minutes after oral dosing and 12 hours after topical dosing, indicating percutaneous absorption rate-limited kinetics. Azelaic acid is a dietary constituent (whole grain cereals and animal products), and can be formed endogenously from longer-chain dicarboxylic acids, metabolism of oleic acid, and ω -oxidation of monocarboxylic acids. Endogenous plasma concentration (20 to 80 ng/mL) and daily urinary excretion (4 to 28 mg) of azelaic acid are highly dependent on dietary intake. After topical treatment with AZELEX[®] in humans, plasma concentration and urinary excretion of azelaic acid are not significantly different from baseline levels. **INDICATIONS AND USAGE:** AZELEX[®] is indicated for the topical treatment of mild-to-moderate inflammatory acne vulgaris. **CONTRAINDICATIONS:** AZELEX[®] is contraindicated in individuals who have shown hypersensitivity to any of its components. **WARNINGS:** AZELEX[®] is for dermatologic use only and not for ophthalmic use. There have been isolated reports of hypopigmentation after use of azelaic acid. Since azelaic acid has not been well studied in patients with dark complexions, these patients should be monitored for early signs of hypopigmentation. **PRECAUTIONS: General:** It sensitivity or severe irritation develop with the use of AZELEX[®], treatment should be discontinued and appropriate therapy instituted. **Information for patients:** Patients should be told: 1. To use AZELEX[®] for the full prescribed treatment period. 2. To avoid the use of occlusive dressings or wrappings. 3. To keep AZELEX[®] away from the mouth, eyes and other mucous membranes. If it does come in contact with the eyes, they should wash their eyes with large amounts of water and consult a physician if eye irritation persists. 4. If they have dark complexions, to report abnormal changes in skin color to their physician. 5. Due in part to the low pH of azelaic acid, temporary skin irritation (pruritus, burning, or stinging) may occur when AZELEX[®] is applied to broken or inflamed skin, usually at the start of treatment. However, this irritation commonly subsides if treatment is continued. If it continues, AZELEX[®] should be applied only once-a-day, or the treatment should be stopped until these effects have subsided. If troublesome irritation persists, use should be discontinued, and patients should consult their physician. (See ADVERSE REACTIONS.) **Carcinogenesis, mutagenesis, impairment of fertility:** Azelaic acid is a human dietary component of a simple molecular structure that does not suggest carcinogenic potential, and it does not belong to a class of drugs for which there is a concern about carcinogenicity. Therefore, animal studies to evaluate carcinogenic potential with AZELEX[®] Cream were not deemed necessary. In a battery of tests (Ames assay, HGPRT test in Chinese hamster ovary cells, human lymphocyte test, dominant lethal assay in mice), azelaic acid was found to be nonmutagenic. Animal studies have shown no adverse effects on fertility. **Pregnancy: Teratogenic Effects: Pregnancy Category B.** Embryotoxic effects were observed in Segment I and Segment II oral studies with rats receiving 2500 mg/kg/day of azelaic acid. Similar effects were observed in Segment II studies in rabbits given 150 to 500 mg/kg/day and in monkeys given 500 mg/kg/day. The doses at which these effects were noted were all within toxic dose ranges for the dams. No teratogenic effects were observed. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed. **Nursing Mothers:** Equilibrium dialysis was used to assess human milk partitioning *in vitro*. At an azelaic acid concentration of 25 µg/mL, the milk/plasma distribution coefficient was 0.7 and the milk/buffer distribution was 1.0, indicating that passage of drug into maternal milk may occur. Since less than 4% of a topically applied dose is systemically absorbed, the uptake of azelaic acid into maternal milk is not expected to cause a significant change from baseline azelaic acid levels in the milk. However, caution should be exercised when AZELEX[®] is administered to a nursing mother. **Pediatric Use:** Safety and effectiveness in pediatric patients under 12 years of age have not been established. **ADVERSE REACTIONS:** During U.S. clinical trials with AZELEX[®], adverse reactions were generally mild and transient in nature. The most common adverse reactions occurring in approximately 1-5% of patients were pruritus, burning, stinging and tingling. Other adverse reactions such as erythema, dryness, rash, peeling, irritation, dermatitis, and contact dermatitis were reported in less than 1% of subjects. There is the potential for experiencing allergic reactions with use of AZELEX[®]. In patients using azelaic acid formulations, the following additional adverse experiences have been reported rarely: worsening of asthma, vitiligo depigmentation, small depigmented spots, hypertrichosis, reddening (signs of keratosis pilaris), and exacerbation of recurrent herpes labialis. **DOSE AND ADMINISTRATION:** After the skin is thoroughly washed and patted dry, a thin film of AZELEX[®] should be gently but thoroughly massaged into the affected areas twice daily, in the morning and evening. The hands should be washed following application. The duration of use of AZELEX[®] can vary from person to person and depends on the severity of the acne. Improvement of the condition occurs in the majority of patients with inflammatory lesions within four weeks. **HOW SUPPLIED:** AZELEX[®] is supplied in collapsible tubes in a 30 gm size: 30 g - NDC 0023-8694-30. **Note:** Protect from freezing. Store between 15°-30°C (59°-86°F). **Caution:** Federal (U.S.A.) law prohibits dispensing without a prescription. Distributed under license, U.S. Patent No. 4,386,104.

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ultrasonic scanning of the pancreas. The laparoscopic ultrasound, preferably with color Doppler, was very sensitive at detecting vascular invasion behind the head of the pancreas. For those judged resectable, definitive pancreatic resection was scheduled for 3-4 days after the staging procedure. The impact of laparoscopic inspection and ultrasound staging on surgical strategy in this series of 25 patients is shown in Table 3.

From December 1992 to August 1994, 115 patients seen at the Memorial Sloan-Kettering Cancer Center in New York with radiologically resectable peripancreatic tumors underwent extensive laparoscopy before a planned curative resection. In this series Brennan, et al²⁴ examined the peritoneal cavity, liver, lesser sac, porta hepatis, duodenum, transverse mesocolon, and celiac and portal vessels. A complete examination was possible in 108 of the 115 patients. Sixty-seven were considered to have resectable disease, and 61 resections were performed (91% accurate). Laparoscopy failed to detect hepatic metastases in 5 patients and portal venous encasement in 1 patient. Laparoscopic ultrasound was not routinely used. In two of the patients believed to be resectable after standard laparoscopy, the addition of laparoscopic ultrasonography detected hepatic metastases. The authors acknowledge that more regular use of laparoscopic ultrasound might have increased the accuracy to nearly 100%. Forty-one patients in this series were found to be unresectable at laparoscopy and were spared open exploration. In a series of patients from the same institution undergoing open exploration from 1993 - 1992, 35% were found to be resectable. With the advent of laparoscopic staging in the later series, the rate of resection was increased to 76% ($p < 0.00001$).

Staging laparoscopy for presumed pancreatic malignancies should be confined to those cases where other, less-invasive modalities are negative or inconclusive. Used in this manner it can avoid unnecessary celiotomy in up to 42%.

Colorectal Cancer

Currently, there is no absolute indication for diagnostic laparoscopy in the evaluation of colorectal malignancies. However, when combined with laparoscopic ultrasound, the approach may compensate for the loss of palpation and permit a more thorough evaluation of the liver. Using laparoscopy as a means to a "second-look" may also play a greater role in the future. Nearly one half of all colorectal carcinomas will recur and most of those will do so within two

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years.²⁵ Combining CEA levels and scanning, CT, diagnostic laparoscopy, and intraoperative ultrasound those patients with an early, potentially resectable, recurrence may be more rapidly and successfully treated.

Prostatic and Ovarian Cancer

Early enthusiasm for laparoscopic staging of prostate cancer has not been supported by clinical trials. Consequently, it is seldom performed.

Laparoscopy can be helpful in staging GYN malignancies by providing periaortic node samples and facilitating "second look" operations. However, because the findings seldom materially affect the need for or extent of surgery, it is not frequently employed.

Diagnosis and Staging of Abdominal Lymphomas

With the exception of Hodgkin's Disease, the advent of high-quality imaging techniques has reduced the need for surgical staging of abdominal lymphomas. Although peripheral nodes may show the presence of lymphoma, abdominal exploration is still recommended for more than 85% of Hodgkin's patients.²⁶ 20-25% will be upstaged (more widespread disease) after abdominal exploration.²⁷ Biopsy of the liver and periaortic nodes and splenectomy can be accomplished with yields similar to open surgery with less operative morbidity. Whole node excision or wedge biopsy is used to prevent crush artifact. Advanced laparoscopic skills are essential to a thorough staging procedure.

Conclusion

Diagnostic laparoscopy utilizing ultrasonography can provide a major advantage in the accurate staging of intraabdominal malignancies. As neoadjuvant protocols are developed for some tumors, such precise staging will be critical to optimizing treatment choices and monitoring treatment response. Further clinical trials are necessary to determine whether the trauma-induced immunosuppression seen after celiotomy will be mitigated by a laparoscopic approach. The issue of port site recurrence has reduced the early enthusiasm for laparoscopic colectomies. A similar concern must be expressed about the use of laparoscopy for staging malignancies. Careful

attention to technique and surveillance will be critical to characterizing and minimizing this threat.

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Following the rapid acceptance of laparoscopic cholecystectomy, a few adventurous surgeons "dared to boldly go where no one had gone before." They sought to achieve the same reduction in morbidity while accomplishing the same surgical goals. This paper will briefly review the current status of minimal access surgery for the solid organs of the abdomen. It will focus on the indications, risks, limitations, and on the balance between the trauma of access and the trauma of the procedure itself. As new techniques and equipment emerge and experience and data are accumulated, this balance may shift. Some of these procedures are in their infancy while others are rapidly becoming the new "Gold Standard".

Introduction

In March of this year laparoscopic cholecystectomy celebrated its eleventh birthday. Who in 1987 would even have thought of it? Open cholecystectomy was a well-established procedure which any competent surgeon could perform with a minimum of morbidity. Even Mouret, who was aware of the latest laparoscopic techniques, thought little of it.¹ One day, as he finished a gynecological procedure on a patient who also had symptomatic cholelithiasis, he shifted his laparoscope to the subhepatic area and found a fairly free and supple gallbladder. When he decided to perform the operation laparoscopically rather than opening her upper abdomen, he fired the first salvo in a surgical revolution which continues to this day. Mouret was not particularly impressed and did not report the operation. However, other surgeons in France, the US, and elsewhere adopted and polished the technique. As a result, laparoscopic cholecystectomy has become the "Gold Standard" for the treatment of symptomatic cholelithiasis.

After the success of this initial procedure, creative surgeons have turned their attention to adapting laparoscopic or minimal access techniques to other surgically treatable conditions. The attempts to assess or to remove all or portions of the solid organs of the abdomen have been among the most innovative and challenging of them all. In deciding whether a minimal access technique has merit, we must consider the balance between the trauma of the access and the trauma of the procedure. Laparoscopic cholecystectomy has been so successful because the major trauma of the procedure - the subcostal incision - has been replaced by 3-4 small access ports. For other procedures: appendectomy, inguinal hernia repair, etc. hospital stays are short and differences in access trauma are harder to prove. As a result, the acceptance of these procedures has been more gradual.

This paper will briefly review the current status of minimal access surgery for the solid organs of the abdomen. It will focus on the indications, risks, limitations, and on the balance between the trauma of access and the trauma of the procedure itself. As new techniques and equipment emerge and experience and data are accumulated, this balance may shift. Some of these procedures are in their infancy while others are rapidly becoming the new "Gold Standard".

The Adrenal

Adrenalectomy is a relatively recent addition to the catalogue of laparoscopic or minimal access techniques. In their retroperitoneal location along the medial aspect of each kidney, the adrenal glands are ideally suited to such an approach. Laparoscopy may improve exposure, hemostasis and specimen retrieval while reducing the morbidity of the access considerably. Careful localization and characterization is necessary to assure safe and complete removal of adrenal lesions.

Indications for Laparoscopic Adrenalectomy Adrenal Cortical Adenomas

Cushing's Syndrome

The most common cause of Cushing's syndrome is the pituitary hypersecretion of adrenocorticotrophic hormone (ACTH). This accounts for 60-70% of cases. Primary adrenal tumors which produce excessive glucocorticoids account for 15-20% of patients with the syndrome. The remainder have ectopic ACTH-secreting tumors. Patients with elevated cortisol levels and low plasma ACTH should undergo a CT or MRI to search for a primary adrenal lesion. One of

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our patients was a young woman with the typical features of Cushing's syndrome who presented with an acute psychotic break due to the excess production of cortisol. After the laparoscopic removal of a unilateral adenoma, her "psychosis" abated and the Cushingoid stigmata are gradually resolving. Unilateral laparoscopic adrenalectomy is appropriate for discrete masses. Bilateral adrenalectomy is an option for those with bilateral adrenal hyperplasia who have failed to respond to treatment of a primary pituitary cause.

Aldosteronoma

Conn's syndrome is the result of an excess production of aldosterone by cells of the adrenal glomerulosa. Refractory hypertension and spontaneous hypokalemia should prompt the search for a tumor. Sixty-five percent of primary hyperaldosteronism is due to an adenoma. Bilateral adrenal hyperplasia accounts for most of the remaining cases. Once the diagnosis of primary aldosteronism is made the distinction between adenoma and hyperplasia must be made to assure the proper treatment. The most useful tests to make this distinction are CT, MRI, and adrenal venous sampling of aldosterone levels. The small size (1-3cm) of benign aldosterone-producing adenomas make them ideal for laparoscopic removal.

Adrenal Medullary Tumors

Pheochromocytoma

These lesions are catecholamine-secreting tumors that arise within the chromaffin tissue of the sympathetic nervous system. They are very uncommon and account for only 0.1% of patients with diastolic hypertension.² They appear far more often on examinations than in the Clinic. Although the majority of these tumors occur within a single adrenal gland, they may be bilateral in 10%, may occur in ectopic sites in 10-15%, and may be malignant in 10%. Consequently, the precise characterization and localization of a suspected pheochromocytoma must precede any attempt to remove it.

The classic patient presents with recurrent paroxysmal hypertension, headaches, palpitations, anxiety, and sweating. Increased urinary catecholamines and their metabolites (VMA and metanephrines) establish the diagnosis. Localization with CT, MRI, or ¹³¹I-metaiodobenzyl-guanidine (¹³¹I-MIBG) scanning is essential for preoperative planning. During a MRI, T2 weighted images of pheochromocytomas are very bright while those of adrenal cortical adenomas have a lower signal density.³ Since ¹³¹I-MIBG is taken up by pheochromocytomas, but not by normal adrenal medullary tissue, this scan complements the MRI in excluding extra-adrenal or malignant lesions.⁴

There is at least one family in Hawaii with the genetic mutation associated with the Multiple Endocrine Neoplasia syndrome (MEN II₁). Family members with this mutation are being screened for pheochromocytoma prior to undergoing a prophylactic thyroidectomy to avoid developing a medullary carcinoma. We have recently performed bilateral laparoscopic adrenalectomies for one member of this family who was found to have 8cm pheochromocytomas. She did well and is now recovering from her radical thyroidectomy for her medullary carcinoma.

Other Adrenal Tumors

Masses discovered incidentally on CT scan should be evaluated for the excess production of cortisol, aldosterone, and catecholamines. If these tests are negative and the lesions are <3 cm, they may

be followed with serial CT scans. Because of the higher risk of carcinoma, lesions >6 cm should be removed irrespective of their functional status. The availability of laparoscopic adrenalectomy may make this the preferred treatment for incidentally discovered tumors which are 3-6 cm in size.

Laparoscopic Adrenalectomy

The first laparoscopic adrenalectomies were performed through an anterior transabdominal approach.⁵ This proved to be tedious and the exposure is significantly improved by placing the patient in a lateral decubitus position.⁶ In this position, gravity increases the exposure as the viscera fall away from the operative field. Posterior and retroperitoneal laparoscopic approaches have their advocates.⁶⁻⁸ It is clear that the procedure should be tailored to the number, size, and location of the tumor(s) as well as to the surgeon's preference and experience.

Results of laparoscopic adrenalectomy

The early learning curve associated with any new procedure will result in longer operative times and higher costs. With experience, laparoscopic adrenalectomy can be performed with operative times comparable to more traditional methods. Hospital stay, narcotic requirements, and recovery are all improved when minimal access techniques are used.^{8,9} Further follow-up will be required to be sure that the recurrence rate and the incidence of missed lesions, both ectopic and bilateral, is equivalent to open methods. Improved imaging techniques should make this a very rare occurrence.

Prinz RA⁷ reported an early comparison of laparoscopic adrenalectomy to two open approaches. His results are summarized in Table 1.

Michel Gagner, who was one of the first to perform a laparoscopic adrenalectomy, recently reviewed his first 100 cases from the Cleveland Clinic.⁸ These results are shown in Table 2. Table 3 Summarizes our experience with open and laparoscopic adrenalectomy.

Conclusions

Laparoscopic adrenalectomy is a relatively new procedure. Its safety and efficacy in experienced hands has been clearly demonstrated in a growing number of reports. By reducing the trauma of access, it has definite advantages over the traditional open methods. However, open adrenalectomy is still the preferred method for patients with adrenal cortical malignancies.

The Kidney

The first successful human nephrectomy was performed in 1869 by Gustav Simon.⁹ Although it has become a standard operation for urologists, the large incision required is associated with significant pain, prolonged recovery, and the risks of infection and herniation. The successful application of minimal access techniques to nephrectomy would reduce the trauma of access and hasten recovery. After working out their technique in the animal lab, Drs Clayman and Kavoussi performed the first laparoscopic nephrectomy in June of 1990.¹⁰

Indications for Laparoscopic Nephrectomy

Benign renal diseases requiring nephrectomy are suitable to the laparoscopic approach. These include end-stage reflux nephropa-

Table 1.— Comparison of Open and Laparoscopic Adrenalectomy. Prinz, 1995⁷

	Open		
	Laparoscopic (n = 10)	Posterior (n = 13)	Anterior (n = 11)
Operating Time (min)	212	139	174
Blood Loss (ml)	228	288	391
Length of Stay (days)	2.1	5.5	6.4
Parenteral Analgesia (doses)	1.4	14.5	15.8

Table 2.—One hundred laparoscopic adrenalectomies at the Cleveland Clinic. Gagner, 1997⁸

Operating Time (min)	123 (80 - 360)
Size (cm)	4.95 (0.7 - 12)
Blood Loss (ml)	70 (<20 - 1300)
Conversion to open	3%
Complications	12%
Length of Stay (days)	2.4 (1 - 19)
Parenteral Analgesia (doses)	5.5

Table 3.— Recent experience with laparoscopic and open adrenalectomy at Kaiser, Hawaii

	Open (n = 6)	Laparoscopic (n = 9)
Mean Operating Time (min)	170	165
Blood Loss (ml)	225	<50
Size (cm)	1 - 10	1.5 - 4
Length of Stay (days)	5.8	2
Parenteral Analgesia (doses)	16	6
Return to Work (days)	25	7

Table 4.— Laparoscopic nephrectomy for benign and malignant renal lesions. Clayman, 1993¹⁴

Number	32
Age (yrs)	16 - 91
Indications	
	Benign 28
	Malignant 4
Operating Time (min)	
	Benign 340
	Malignant 437
Blood Loss (ml)	211
Length of Stay (days)	3.7
Complications	37%

thy; renal vascular hypertension; poorly functioning kidney due to chronic obstruction; recurrent pyelonephritis; and, with extensive experience, living-related donor nephrectomy. Laparoscopic total or radical nephrectomy has also been reported for small (< 5cm) renal tumors.

Operative Approaches

Both the lateral, transabdominal¹¹ and the retroperitoneal¹² approaches have been described. The latter is facilitated by the use of dissection balloons first described by Gaur.¹³ These balloons are now commercially available and are similar to the ones used for laparoscopic inguinal hernia repair. This is particularly valuable for patients who have had prior abdominal operations. The choice of approach will also be governed by the surgeon's experience and preferences.

Results of Laparoscopic Nephrectomy

Clayman, et al have one of the largest series of laparoscopic nephrectomies. A recent report¹⁴ of their initial experience is presented in Table 4. Table 5 summarizes several authors' results with laparoscopic retroperitoneal nephrectomy.

Two patients have undergone laparoscopic nephrectomy for benign disease at the Kaiser Foundation Hospital in Honolulu. Learning from these early pioneers and from our own experience in other complex laparoscopic procedures, we have had very similar results.

Laparoscopic Donor Nephrectomy

Donor nephrectomy is a unique operation. It confers absolutely no benefit to the patient and damage to the removed kidney harms two patients. Open donor nephrectomy is not without risk. Clayman cites several series where the complication rate was similar to those reported in his series listed above. However, Flowers¹⁵ (Table 6) has reported excellent results in a case-controlled series which is now >150 patient donors. He has proposed that if the procedure were more available, more relatives might chose to become donors.

Conclusion

For properly selected patients, laparoscopic nephrectomy offers the benefits of minimal access surgery while accomplishing the same surgical goals. Those considering this approach should collaborate with experienced laparoscopic colleagues to shorten the "learning curve". Whether laparoscopic donor nephrectomy will find broader acceptance and increase the donor pool will require careful monitoring of results from the pioneer centers.

The Spleen

The first successful splenectomy was performed during an exploratory operation for a suspected ovarian tumor. The surgeon, Jules Pean (1830 - 1898), was a well respected pioneer in French surgery. He was, perhaps, the first of the French surgeons whose efforts were pivotal in the development of minimal access surgery. His skill in removing a very large splenic cyst and the remaining spleen is evident in his report.¹⁶ The operation took two hours and "less than 100 gms of blood were lost". This was well before the availability of electrosurgical, argon beam, ultrasonic, or surgical stapling devices. The patient seemed to have had more trouble from the chloroform-induced vomiting than from the operation!

Indications for Laparoscopic Splenectomy

Splenectomy is often indicated for hematological diseases which result in the damage or destruction of the formed elements of the blood or for staging hematological malignancies. These include immune^{17,18} and idiopathic¹⁹ thrombocytopenic purpura, hemolytic anemia,²⁰ or Hodgkin's lymphoma.²¹ Early in one's experience, small spleens in patients without significant co-morbidities are the most appropriate. However, more experienced laparoscopists are reporting the removal of very large specimens - in excess of 300 grams. Preoperative angiographic embolization of the splenic artery may be helpful with these large spleens or early in a surgeon's experience. It is not usually necessary with the smaller ones and may cause pancreatitis, especially if gel foam is used for the embolization.¹⁹ We have not used preoperative embolization for our laparoscopic splenectomies.

Searching for accessory spleens is an important step in the procedure. Advanced laparoscopic skills and repositioning the patient frequently to improve exposure are essential. Although there is not general agreement on whether preoperative scanning is necessary to identify accessory splenic tissue, it may be valuable in obese patients or early on the a surgeon's "learning curve".

Most resected spleens are placed into a sturdy sac and morcellized for removal. While this has raised questions about the suitability of the specimen for pathological examination, the large pieces are adequate in most cases.

Results of Laparoscopic Splenectomy

Until randomized, prospective trials are available, case-controlled studies are helpful in evaluating the procedure. One such trial was recently published by Diaz.²² (Table 7)

Conclusions

As with the previously described procedures for adrenalectomy and nephrectomy, laparoscopic splenectomy may permit us to reduce the trauma of access while accomplishing the same surgical goals. This is another "ideal operation" for laparoscopy and is well on the way to establishing itself as the "gold standard" for the procedure.¹⁸

The Pancreas

Pancreatic resections are usually performed for cancer, for the intractable pain of chronic pancreatitis or for the drainage or resection of pseudocysts.²³ For peripancreatic cancer, pancreaticoduodenectomy with adequate node clearance has shown steadily improving results. With thorough staging,²⁴ patients can be more accurately chosen for exploration and attempted resection. Laparoscopic surgery of the pancreas is still in its early stages of development. Although the entire gland can be visualized laparoscopically, it cannot be thoroughly palpated. Laparoscopic ultrasound may allow us to overcome this obstacle.

Laparoscopic pancreaticoduodenectomy has been successfully accomplished by a few exceptionally skilled surgeons.^{25,26} However, even they feel that the procedure is of little real benefit to the patient. Currently, laparoscopic pancreatic surgery is best suited for the localization and enucleation of benign islet cell tumors and distal resections for chronic pancreatitis. Staging malignant tumors laparoscopically and bypassing those which are unresectable are also becoming more widely done.

Table 5.— Laparoscopic retroperitoneal nephrectomy in several centers. Perle, 1996¹²

#	Success (%)	OR Time (hrs)	EBL (ml)	LOS (d)	Comps (%)
154	63-100	1.9 - 5.1	<150	<3-8	0 - 15

Table 6.— A comparison of open & laparoscopic live donor nephrectomy. Flowers, 1997¹⁵

	Open	Lap	p=<
Number	65	69	
Operating Time (min)	212.8	226.3	0.1658
Conversion to Open	-	6%	
Blood Loss (ml)	408	122.3	0.0001
Length of Stay (days)	4.5	2.2	0.0001
Graft Survival (%) [mean FU: 7 months]	64 (98)	67 (97)	0.6191
Delayed Graft Function (%)	1 (2)	2 (3)	0.4961
Parenteral Analgesia (doses)	60.1	28.6	0.0001
Recovery (d)			
Housework	26.9	8.8	0.0001
Driving	31.6	11.1	0.0001
Working	51.5	15.9	0.0001

Table 7.— Case-controlled study of open and laparoscopic splenectomy. Diaz, 1997²²

	Open	Lap	p=<
Number	15	15	
Splenic	492	305	N.S.
Weight (g)	(64 - 1130)	(63 - 878)	
Operating Time (min)	116 ± 64	196 ± 71	0.0031
Conversion to Open	-	0	
Blood Loss (ml)	359 ± 318	385 ± 168	N.S.
Length of Stay (days)	8.8	2.3	0.001
Return to Full Activity (days)	23 (14 - 46)	12 (5 - 22)	0.01
Cost (\$)			
OR	4372	12827	0.0001
Hospital	6553	1389	0.0005
Total Cost	10925	14216	N.S.
	± 8752*	± 2550**	
	* 2 readmissions	** No readmissions	

The Liver

The size and complexity of the liver make it a formidable surgical challenge. It remains the last of the abdominal organs to be approached laparoscopically. From the method of exposure to the removal of the specimen, evolving technology will be required to make laparoscopic hepatic surgery safer and more effective.

Indications for Laparoscopic Hepatic Surgery

Diagnostic laparoscopy with intraoperative ultrasound can detect primary and metastatic lesions which may have eluded prior studies. The management of hepatic cysts has been changed by the advent of laparoscopy. Unroofing and fenestration can lead to the resolution of such cysts.^{27,28} The reduced trauma of access can allow a much more rapid recovery and occasionally spare the patient an unnecessary celiotomy.²⁴

The Future of Laparoscopic Hepatic Surgery

A small lesion metastatic to the left lobe may be considered for laparoscopic resection. Using blunt and ultrasonic dissection such a lesion can be resected with an adequate (2cm) margin of normal tissue. When a major hepatic vein is encountered, switching to mechanical lifters and a "gasless" laparoscopic environment may help to prevent a CO₂ embolism. Adventurous surgeons in Europe have attempted larger resections on both sides of the falciform ligament.²⁹ However, better instruments for dissection and hemostasis as well as the FDA's approval of fibrin glue will be necessary if such procedures are to become more commonly performed in the US.

Comment

Laparoscopic surgery has grown considerably from the early "observation" and simple diagnostic efforts of physicians seeking to avoid a surgical procedure for their patients. Surgeons skilled in the techniques of minimal access surgery are now able to approach nearly every organ of the body. While some of these procedures remain developmental and controversial, others have become the new "Gold Standard". Since many of the problems reviewed are relatively rare and the techniques can be difficult to learn, it may be appropriate to concentrate the experience in a few very experienced laparoscopists. This has been the approach at UCSF, Kaiser in Hawaii, and at other institutions. The challenge for surgeons as we wage an unwinnable battle against obsolescence is to carefully

evaluate each new innovation and be certain that fundamental surgical principles are honored and treatment goals are realistic. As Lord Moran, Churchill's personal physician, observed:

"The feasibility of an operation is not the best indication for its performance."

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Life in These Parts

Words that Won't Gladden Any Doctor's Heart

"My social worker says you have to fill this in."
"My real doctor always gives me amoxicillin when I have a cold."

"He hates doctors. Don't you honey?"

"My mother's doctor doesn't do house calls. Could you go out and see her?"

"I need time off work."

I just want to ask a question."

"I don't need to come in and see you; I just need a form filled out to say I can't work."

"You tell me; you're the doctor!"

"Can you please come and see my husband. But don't tell him I called you. He refuses to see a doctor."

"You're rich, Doctor!"

"While I'm here..."

"It was a little white pill."

"I'm allergic to everything."

"I don't like taking pills so I'm taking garlic instead."

"I've got burn-out but the insurance company doesn't accept that. Fill this out with something else."

"All the doctors I've been to have been useless."

"I don't believe in doctors."

"It's not what I eat, because I hardly eat anything!"

"I'm a lawyer specializing in personal injury."
And finally, of course: "I'm from the government and I'm here to help you."

Dr Jeannie Rosenberg, Stitches, May 1998

Ethnic Jokes Helped Us Laugh at Ourselves

*Richard Lee-Ching MD (Hilo),
Extracts therefrom*

"As a Pake plantation alumnus who loves ethnic jokes, here's another viewpoint. The purpose of the jokes is totally different from on the Mainland. On the Mainland, ethnic jokes are always about others, never about one's own group. They are often meant to reinforce one's superiority by stereotyping others.

Locally, at least in my generation, jokes were meant to be inclusive. We tried to laugh with others about their group and laughed at our own group. By laughing at our stereotypes, we got the ethnic stuff out of the way and could relate on common ground.

For that reason, favorite jokes would start, "a Portuguese, a Filipino, and a Pake" because everyone was included and the biggest hit involved one's own ethnic group.

The Beamer's Mr San Cho Lee is a classic with the biggest dig at Hawaiians. Frank De Lima may tell a lot of jokes, but always the most about Portuguese. Often I wish he would tell more Pake jokes because I feel left out.

The best jokes seem to come out of the plantations rather than the towns because of the close contact involved and the need to break down barriers with co-workers. The interactions in-

cluded groups at equal social levels and poked fun at quirky behavior and required the ability to laugh at oneself.

Why so few haoles jokes? In the 1950s, relationships on the plantations were not equal between haoles and workers. We did not see them socially because they were our bosses. Actually, the major point was that in those days, we did not see them as funny.

Times are a-changing and we must change. I understand that ethnic groups today just do not have the same feelings for each other as we did on the plantations. We are more urbanized and relationships are different. But, because I feel the way I do, I will continue to look for good Pake jokes and appreciate Frank De Lima's performances because if we cannot laugh at ourselves and with each other, we will have lost something of what makes Hawaii special.

Potpourri

(Condensations of Medical Anecdotes from Stitches)

Pet Therapy

Mrs. T. came in complaining of weakness and fatigue. She carried a wiry old dog in her purse that trembled and barked continuously. After a brief review of her medical history and presenting complaints, it became clear that her main problem was loneliness and depression. She was a widow of 10 years who lived alone with her only companion Bailey, an 8-year-old terrier that never left her side. She agreed to a low dose trial of Zoloft.

She returned one month later, with a barking dog, complaining of no improvement in her mood. I patiently advised her that the medication could take another 2 to 4 weeks and she left with more Zoloft.

I didn't hear from her again for over two months and became concerned. We telephoned her to come in.

She arrived that afternoon, dressed very brightly, smiling, her dog with a bow in its hair. She told me her life has been very busy recently and she hadn't had time to see me. When offered another prescription, she declined, stating she had all the Zoloft she'd need for now. She reluctantly told me that she had stopped taking the pills, but she was cutting them into quarters and giving them daily to Bailey. The dog was calmer and no longer barked excessively and she was able to visit her family and friends more regularly.

Dr Mitchell Rubin, North Vancouver, B.C.

Slip of the Pen

I was asked to see an earnest young man urgently, for purposes of providing a complete exam. He'd recently been accepted to the seminary and was required to provide evidence of good health before entry the following week.

My diligent exam was followed by a handwritten note intended to convey the healthy outcome of his exam. Both patient and letter were dispatched in good order.

The following day, the young priest-to-be sheepishly returned, requesting that I review the letter and revise it as appropriate. In doing so, I discovered my report concluded with "...examined this man on this date and find him to be in good health and fit for the cemetery."

Revisions were accordingly provided.

Dr Kevin Doady, Parkdale, P.E.I.

Miscellany

The kindergarten teacher had just finished a science demonstration on magnets. As usual, she wrapped up the lesson by asking the kids to summarize what she'd explained.

"My name begins with M, and I pick things up," she said. "What am I?"

"A mother," was the instant reply from several kids.

Conference Notes

Eighth Annual Hawaii Gastroenterology

Symposium, July 11, Sat, Hawaii Prince Hotel, chaired by *Stanley S. Shimoda*, Division Chief, Gastroenterology, John A. Burns School of Medicine and sponsored by Astra Merck.

GERD Treatment & Cost Effectiveness

Nimish Vakil, Professor of Medicine, University of Wisconsin School of Medicine.

**The goal of maintenance Rx is to control sy's and prevent complications. GERD = is likely to relapse and needs maintenance Rx, esp in pts with severe esophagitis.

Pts who have relapsed require long term maintenance Rx; otherwise quality of life and risk of complications.

- NERD (Negative endoscopic reflux dis) need long term maintenance Rx to prevent progression to erosive disease.
- Pts with esophageal strictures treated with dilation: Maintenance Rx with PPI delays or prevents recurrence
- Barretts Esophagus: Maintenance Rx (controversial at present)
- GERD a/c pulmonary and otolaryngeal lesions (asthma, reflux laryngitis, vocal cord granulomas): Long term PPI warranted.

Choice of Rx for GERD: severity, long term safety, cost effectiveness

- Non-erosive and mild sy's
 - Life-style modification
 - Cisapride
 - H₂blocker
- Advances erosive disease and complicated esophagitis: PPI
- Moderate disease: Either higher dose H₂blocker or PPI

Pharmaco-Economic Studies:

- Comparing PPI's and H₂ Blockers: Cost of symptom free model over 7 mos period: 43% less with PPI than c H₂Blocker or life-style modification.
- Comparison of Costs (1 yr direct cost)

- PPI's (\$1192)
- H₂Blocker (generic) (\$1152)
- H₂Blocker (brand) (\$1495)

***Maintenance Rx/after first relapse of sy's; except in Grade IV disease where maintenance Rx started after initial dx.

"Colo-rectal Ca Screening" Douglas Rex, Professor of Medicine, Indiana School of Medicine.

Summary of Screening Modalities:

- Currently, no ideal screening mechanism for colorectal polyps and Ca.
- Flexible sig: insensitive for proximal colon Ca and Relatively expensive
- Combined annual FOBT beginning at age 50 and flex sig q 5 yrs = appropriate combination for current use.
- BE = too insensitive for large colon polyps and early stage cancers.
- Colonoscopy is too expensive for use in average risk persons.
- "My own preference in average risk persons equals single low cost colonoscopy at age 55 to 60 performed by an experienced colonoscopist. A second colonoscopy 7 to 10 yrs later when negative."
- Colonoscopy is procedure of choice in HNPCC (hereditary non-polyposis colorectal cancer syndrome) kindreds and in persons with positive family hx.

Screening in Specific Risk Groups:

- Breast Ca pts = average risk for colorectal CA: (same screening measures)
- Ovarian & Uterine Ca pts: Higher risk for colorectal Ca i.e. same screening
 - 1.4 for endometrial Ca, measures as average risk woman
 - 1.6 for ovarian Ca
- Previous cholecystectomy: 2.0 increased relative risk for Rt sided colon Ca 15 yrs post op.
- HNPCC: Colonoscopy q 2-3 yrs beginning at age 20
- Familial polyposis: If positive genetic testing, flex sig q 6 mos till polyps appear. If negative genetic testing, flex sig at ages 18, 25 and 35.

Cardiology Update 1998, VP Gregg Fonarow from UCLA, Friday, August 28, QMC

Introduction

Coronary atherosclerosis is a progressive disease. While the short term prognosis may be improved with medical management and revascularization, the long term survival must be addressed by treating the underlying atherosclerotic disease. All the trials i.e. REGRESS, CARE, LIPID, and Post CABG show that "statins" reduce total mortality in pts with CAD. Statins are both anti-inflammatory and anti-atherogenic (total LDL is not important), the lowering of LDL with statins is a fundamental therapy of atherosclerosis. The diagnosis of atherosclerosis is the prognostic index for CAD, cerebrovascular and peripherovascular events.

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Announcement

General Practice For Sale.—in Medical Arts Building. Please call 593-9558.

CAD Therapy

ASA, Statin, Beta Blockers & ACE reduce total events. Ca Channel Blockers have increased mortality and events.

Therapeutic Regimens & Events

- Statins alone: 18.6%
- Statins plus ASA: 11.2%
- Statins plus ASA plus BB (or ACE): 8.6%

UCLA CHAMP (Cardiac Hospitalization Atherosclerosis Management Program)

80% of the cardiac patients are discharged on this program

- ASA
- Statin (LDL less than 100; Total Cholesterol less than 180)
- ACE
- Beta Blocker

Impact of Statins on CAD pts:

- Reduces PTCA/CABG
- Less hospitalizations
- Fewer MI's, CVA's, and deaths

Plaque Stabilization of Statins: Has anti-inflammatory effect on all coronary, cerebral and peripheral vessels.

Patients with high triglyceride levels: Start with gemfibrozil, then change to statins with or without Niaspan.

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For Sale.—Brand new HP Desk Jet 670 Color Printer. \$150/offer. Call Nelson (808) 536-7702 ext. 2220.

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Is it progress or a hi-tech circus?

In New Jersey, a 35-year-old man was injured in a motor vehicle crash, and later brought a malpractice suit against his doctors. He was treated for two broken legs, but he contended that doctors missed a fractured cervical vertebra, which ultimately resulted in permanent paralysis and dependence upon a ventilator. The judge granted permission for the patient to testify from his bed via a live internet-based video conference hookup. When defense attorneys had an opportunity to view how the video picture of the bedfast patient on his ventilator would look to a jury, the case was settled. The amount of the settlement was not disclosed, but it was described as the largest single award for pain and suffering in New Jersey history.

Assisted suicide is very controversial, but the truth is, a lot of people want to get the—outta here. G. Carlin

A recent issue of the *Journal of the American College of Cardiology* presented the findings of a report on the application of medical and surgical intervention near the end of life. These procedures are a tempting target for the bean counters cutting costs in medical care. Rejecting physician-assisted suicide and also futile interventions, the authors of the study emphasize that physicians have an ethical obligation to protect these vulnerable patients and provide high quality care. Of course, patients might take the advice of an LPN in Indiana. To avoid the agony she saw on patients on life support, she stipulated that no such measures should apply for her. To make certain the message was known, she had her living will tattooed on her abdomen.

Same subject — part 2

Perhaps the first step down the "slippery slope" regarding physician assisted suicide has already occurred in Oregon. The Oregon Health Services Commission voted to include physician-aided death on the list of health services available to Oregon's Medicaid people. This decision to fund assisted suicide for poor people with taxpayers dollars has expanded the government's involvement in an issue which properly is a matter of choice and personal conscience. Whatever one thinks about Dr. Death, Jack Kevorkian does not charge for his services, and no one can offer the opinion that he is selling suicide. Now, due to the recently affirmed Oregon law, it appears that the federal government will provide an E & M code with appropriate billing.

What they gain from their wealth is only the fear of losing it.

After six years of their money grubbing monopoly, *Pillar Point Partners* has been dissolved. Visx and Summit laser companies have agreed to grant each other royalty-free cross-license to use their respective patents. It was not the good old American free enterprise desire to compete. No, the obvious force was the March lawsuit brought by the Federal Trade Commission against both companies, calling their partnership illegal and alleging an attempt to "fix, stabilize, raise and maintain the per-procedure fee." The FTC agrees that a charging fee is legal, but calculated an overcharge of \$150 per procedure was being assessed. Supposedly, neither Visx nor Summit has plans to decrease the per-procedure charge, but now the fee will go directly to the company that built the laser. Competition will have an impact, and as the market for new lasers approaches saturation, the user fee will decline.

Society always uses a leaky bucket to move money from rich to poor.

A study by the Florida Hospital Association revealed that 103,000 Floridians were added to the rolls of uninsured in 1996 alone, making 18% of the population without health insurance. That figure puts Florida sixth in the nation behind Arizona, Texas, Arkansas, New Mexico and Louisiana. Despite a strong mainland economy, low premium increases, and some health insurance reforms, the ranks of the uninsured continue to increase. Experts blame increasing benefits costs, conversion of full-time to part-time positions and contract work, and also the shift of more workers into service employment where health benefits are less common. While a national health insurance plan appears to be tabled for the present, the spectre looms. With data like that, Congress will be increasingly pressured to enact a government sponsored health plan.

Slavery is banned in America, except for hospital house doctors.

Under New York law, a resident physician can work no more than 80 hours a week over a four week period and no more than 24 consecutive hours at any one time. The New York State Department of Health has penalized the New York University Medical Center \$16,000 for violations found during a surprise inspection by the health department. According to investigators, two-thirds of residents worked 30 to 36 hours straight, and four first year cardiovascular surgery residents were putting in 110 to 130 hours a week. The NYU hospital and several other had previously been cited for non-compliance, and the state plans to continue its unannounced inspections of all teaching hospitals.

Just to prove that all the idiots are not at HCFA.

Are we in the hands of imbeciles or what? Now the Department of Transportation has established a "peanut-free zone" on aircraft. The area consists of the passenger's row as well as the one immediately in front and behind the person allergic to peanuts. This is not a Dave Barry joke, but a DOT decision responding to whining from self-identified victims. Some airlines have responded by switching to nothing but pretzels, to prevent the problem and to avoid having FAA snooping through the snack bar. Now you will not merely be checked for firearms, knives, scissors, hat pins, and explosive devices, you will have to declare the peanuts in your snickers candy bar. If peanuts must fall, can mac nuts, cashews, almonds and pecans be far behind? Soon, the only nuts will be in the Department of Transportation.

A woman's a woman till the day she dies, but a man's only a man as long as he can.

Questions still linger about the possible long term effects of sildenafil citrate (*Viagra*) on retinal diseases. While the drug is very effective for erectile dysfunction, Professor Michael Marmor MD, at Stanford is concerned that no objective tests such as electroretinograms or measuring retinal function after light stimulation, have been included in the long term studies. Not to worry says Pfizer, stating "Viagra's occasional effect on vision, characterized by a blue color tinge or light sensitivity, is mild and transient." According to late night talk show host Conan O' Brien, now you can make love alright, but you feel like it's with a *smurf*.

Now here is another group of watchbirds, watching you.

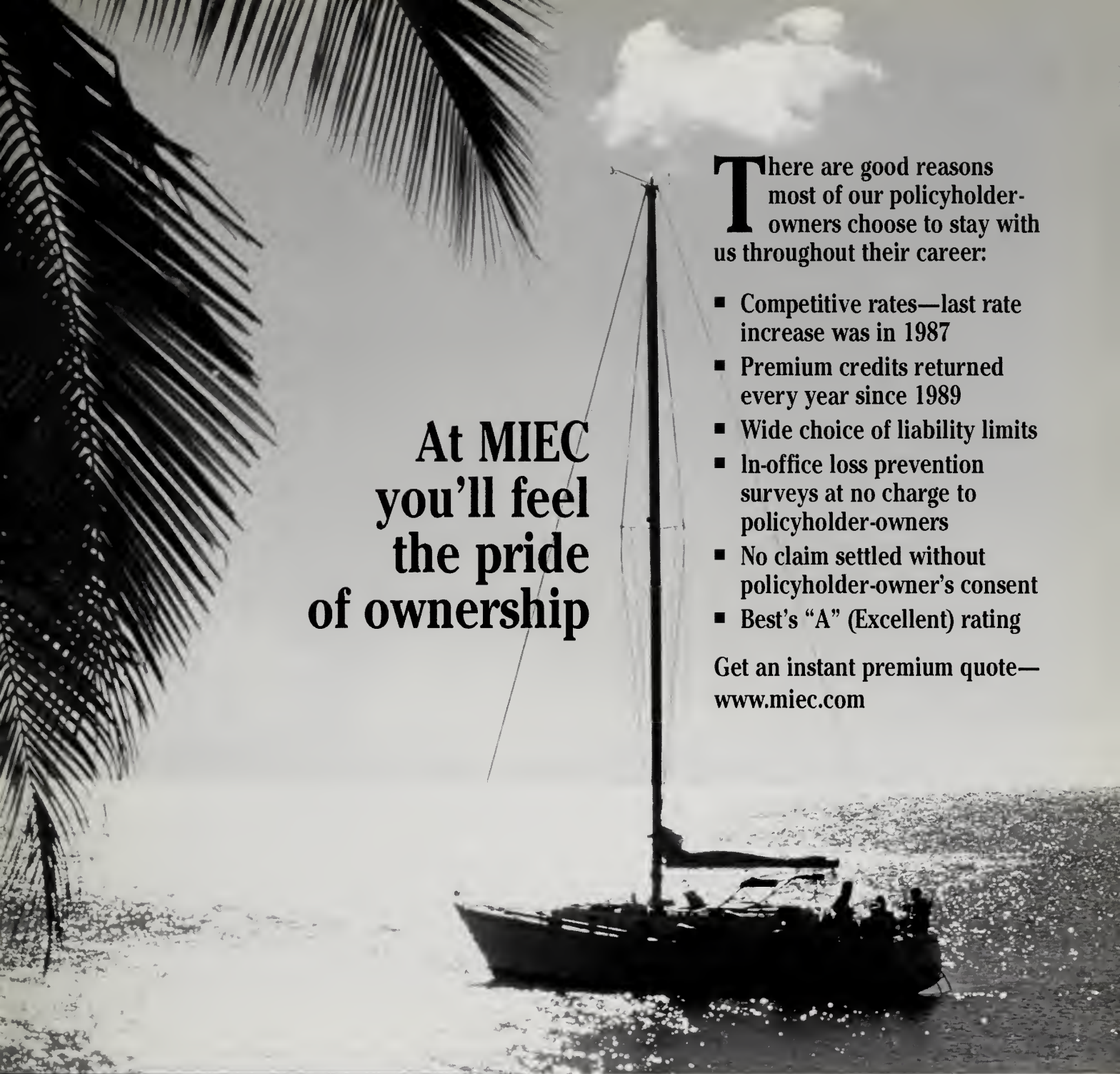
Starting in January, the Department of Health and Human Services will reward Medicare patients and others who report suspected fraud by doctors and other health care providers, if it leads to recovery of overpayments. Under the program, seniors could receive 10% of the recovered funds, or \$1,000, whichever is larger. Identities of the whistle-blowers will be kept confidential. HHS receives 130,000 fraud and abuse leads annually, and nearly 3/4 of these come from patients. Officials predict that reports of fraud and abuse will increase by 5 to 10%.

Don't forget! It's white wine with Hershey bars.

In curiosity about the practice of "breathing" his bottle of red wine, pulmonologist Normal Charan of Boise, Idaho, wanted to get serious. First, he measured the pO₂ of five corked bottles of Cabernet Sauvignon and found it to be consistently 31 mm. Hg. Then he repeated the exercise measuring the pO₂ at two, four, six and 24 hour intervals after opening, and found the pO₂ doubled to 61 mm. Hg at 24 hours. However, by simply swirling the glass, the pO₂ jumped to 150 mm. Hg. He continued his experiment by inviting 33 wine tasting guests to conduct a blind study, and found that 32 of 33 tasters correctly identified the oxygenated wine, and moreover pronounced it better tasting than the freshly decanted beverage. As Dr. Charan observed, like blood, oxygenated wine is better than non-oxygenated.

Addenda

- ❖ In 1992, 2,421 people checked into emergency room with injuries caused by house plants.
 - ❖ If you would make the gods laugh, tell them your plans.
 - ❖ Blind people don't sky dive, because it scares hell out of their seeing-eye dogs.
- Aloha and keep the faith — rts ■



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- Stayed up late reviewing clinical practice guidelines
- Helped us resolve our members' most challenging care concerns
- Flown in from the Neighbor Islands to participate in quality management meetings
- Helped us provide evidence of improved outcomes for members
- Achieved consistently high levels of patient satisfaction
- Increased immunization rates for Hawaii's keiki
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- Gone beyond the call to demonstrate truly excellent standards of care



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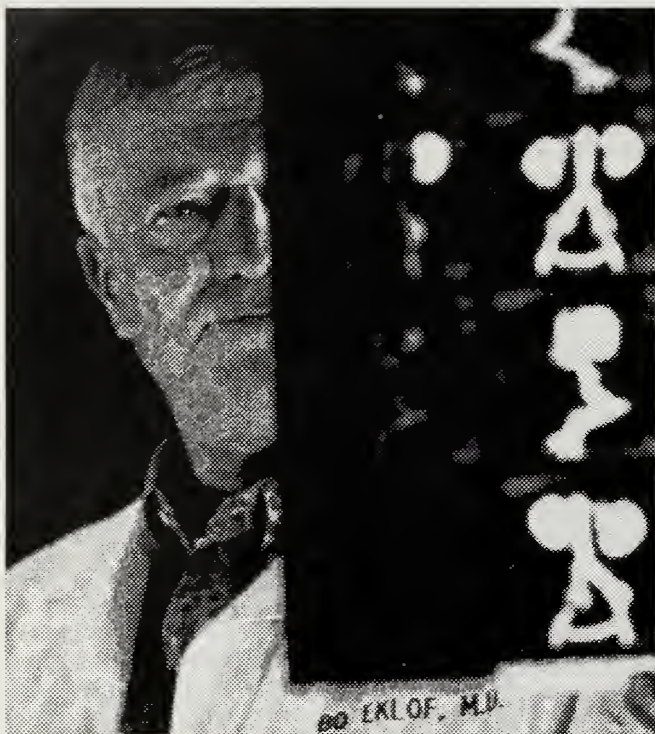


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Depicting the two Hawaiian migratory voyaging canoes under full sail at sea.

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Luncheon

Prevention of Sudden Cardiac Death

Peter J. Kudenchuk, MD, FACC, FACP

December 4, 1998, 12:30 – 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants should be able to:

- Understand the natural history of patients with high risk heart disease.
- Recognize recent clinical trials that have focused on antiarrhythmic prophylaxis of high risk cardiac patients.
- Evaluate the role of implantable devices in the prevention of sudden cardiac death.

We would like to acknowledge the generous Educational Grant from Wyeth-Ayerst Laboratories

– Friday Noon Conference –

Hypercoagulable State in Budd-Chiari Syndrome

Dipika Mohanty, MD

December 11, 1998, 12:30 – 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants should be able to:

- Understand the clinical course of the Budd-Chiari Syndrome.
- Review the management of the Budd-Chiari Syndrome.
- Summarize the clinical characteristics of the case studies.

– Tumor Board Conference –

Thyroid Cancer Incidence

Reuben Guerrero, MD

December 14, 1998, 12:30 – 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants should be able to:

- Understand the difference in the incidence of thyroid cancer among different ethnic groups.
- Recognize the different type and incidence thereof.
- Describe diagnosis and treatment of thyroid cancer.

– Friday Noon Conference –
Luncheon

Viscosupplementation in Osteoarthritis

Timothy Olderr, MD

December 18, 1998, 12:30 – 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants should be able to:

- Gain knowledge of pathophysiology of synovial fluid in health and disease.
- Summarize the Straub experience.
- Understand the role of viscosupplementation.

We would like to acknowledge the generous Educational Grant from Wyeth-Ayerst Laboratories

Please call Fran Smith at 522-4471 for more information.



Editorial

Norman Goldstein MD Editor, Hawaii Medical Journal

As the Hawaii Medical Journal enters its 58th year of continuous peer-reviewed publication, Hawaii physicians, other healthcare providers, the Editorial Board and Publications Committee have reason to be proud of a job well done for yet another year.

Reviewers are the foundation of our Journal. The only other peer reviewed medical journal in the United States is the *New England Journal of Medicine*, now in its 86th year. Because of the necessity for anonymity in their task, peer reviewers receive no published accolades for their efforts but they all deserve our gratitude for the high quality manuscripts printed herein.

This year we had excellent Special Issues dealing with Clinical Toxicology and the Hawaii Poison Control Center in March and April. September featured Traumatic Brain Injury, and the final special issue of the year was in November, featuring Laparoscopy Part I.

Regular columns continue to be very popular. Henry Yokoyama's *News and Notes* and Russ Stodd's *Weathervane* are the monthly offerings most physicians appreciate. The medical school's *Hot Line, Military Medicine*, and the newly instituted *Harry L. Arnold Case Report of the Month* in honor of our former Editor (1941-1985) features interesting reports of medical cases in Hawaii.

A major emphasis in the Editorial section during 1997/98 was doctor-assisted death with dignity, due to the Governor's impaneling of a Blue Ribbon Committee which met monthly beginning in December 1996. The final report was submitted to the Governor on May 11, 1998. The majority opinion stated: "Because we in Hawaii live in a pluralistic society with many religious and cultural perspectives, it is important that no one perspective be allowed to impose its beliefs and mores on another."

Another year of thanks is extended to Carol Uyeda, Editorial Assistant; Becky Kendro, Managing Editor; our Editorial Assistants, Drake Will MD, Ann Catts MD, and Al Morris MD; and advertising representative Michael Roth. Our cover by Dietrich Varez continue to be the most artistic of all medical journals—take a moment to scan others the next time you are in the Hawaii Medical Library.

Thanks also to the membership of the Hawaii Medical Association for continued support and encouragement, which enables interested doctors of Hawaii to experience for themselves the editorial freedom extended to me. It is a lot of work, but very enjoyable, educational and satisfying for everyone involved.

Mahalo and Aloha, Carol Uyeda

After serving as an Editorial Assistant for almost 4 years, Carol Uyeda has left the Hawaii Medical Association. On December 18, she departs Hawaii for a new career in Phoenix.

As our Editorial Assistant on the Journal, she worked very closely with Becky Kendro, our managing editor, and Michael Roth, our advertising representative, to get and retain new advertisers. We are "in the black," thanks to this troika.

Carol wore many hats at the Hawaii Medical Association. She produced the invaluable HMA Directory, the Hawaii Medical News and, undoubtedly, many other in-house projects about which even I was not aware.

She was always there for me - via phone, fax, and e-mail. She had to "push" our regular column writers to get their materials in promptly in order to meet production deadlines.

She worked diplomatically with our authors, informing authors of their acceptance promptly, and also handled the rejected manuscripts with friendly, courteous correspondence.

We wish you well in Arizona, Carol. Mahalo nui loa.

Welcome aboard, Drake Chinen.

Announcement

Robert T. Wong, MD Lecture Series Announces Speakers for 1999

Harvey F. Lodish PhD. is the first of 1999's distinguished speakers in the **Robert T. Wong MD Lecture Series** at the John A. Burns School of Medicine.

Dr Lodish is a Member of the Whitehead Institute for Biomedical Research and a Professor of Biology at the Massachusetts Institute of Technology. He is a member of the National Academy of Sciences, one of the highest honors given to scientists in the U.S. His laboratory has concentrated on the biogenesis, structure, and function of secreted and plasma membrane glycoproteins.

His public lecture will be held on Thursday, January 21, 1999 at 4:30 p.m. at the University of Hawaii at Manoa. His topic will be "**Developmental and Cancer Biology: Importance of TGR-b.**" Reception to follow lecture. He will also be participating in Pediatric Grand Rounds, Thursday, January 21, 1999, at Kapiolani Medical Center for Women and Children, from 8 to 9 a.m. His Topic will be "**Erythropoietin, the Erythropoietin Receptor and the Control of Red Cell Production.**"

He will be speaking during lunch with graduate students on Thursday, January 21, from 12 to 2 p.m. at the University of Hawaii at Manoa (UHM), Biomedical Science Building (BioMed).

He will also be participating in Medical Grand Rounds, Friday, January 22, 1999, at Queen's Medical Center, Kam auditorium and his topic will be "**Regulation of Fatty Acid and Glucose Transport.**" From 11:30 to 1 p.m., at Unit 5 (MS II) and Unit 2 (MS I) Colloquia, UHM Biomed B-103. The topic will be "**Regulation of Fatty Acid and Glucose Transport.**"

The Series' second lecturer will be Susumu Tonegawa, PhD. Dr Tonegawa received the Nobel Prize for in Physiology or Medicine in 1987 for his discovery of "the genetic principle for generation of antibody diversity." He will be presenting his lecture on March 12, 1999.

Started in 1985, the Robert T. Wong, MD Lecture Series brings to Hawaii gifted individuals who have made major contributions to medicine and science.

For additional information, please contact Julie Woo, 956-5087.



President's Message

Patricia L. Chinn MD
President, Hawaii Medical Association

Today, as individual physicians and as an organization, we are facing difficult times and must make difficult decisions. We can no longer shy away from controversial issues. Today, there are things we can no longer afford to do, and things we can no longer afford not to do. As a professional organization we must advocate for physicians, but first and foremost, we must serve and protect our patients.

On October 2, 1998, the HMSA held a special membership meeting for the purpose of changing its Constitution and Bylaws. These proposed amendments serve to disenfranchise the members of this mutual benefit society, a move of great concern because of the enormous influence exerted by this health plan behemoth. Because the HMA is dedicated to patient advocacy, your Executive Committee decided on two actions: 1) to oppose these amendments; and 2) to notify our membership of the significance of this meeting. Furthermore, the HMA joined forces with the Hawaii Coalition for Health and the Hawaii Federation of Physicians and Dentists to take a unified position, as all three organizations opposed these changes which would affect HMSA's 600,000 members on the basis of patient advocacy.

Unfortunately our efforts failed. The deck was stacked against us. There was only a minimal 10 day advance public notice for the

meeting. The meeting was scheduled for a busy Monday morning, the eve of the general election. After the meeting, HMSA's spokesman admitted that: 1) the HMSA contacted only certain employer groups and; 2) an exceptionally large number of paid HMSA employees, "as many as 200 staff members might have attended to assist in the meeting" (Honolulu Star Bulletin 11/3/98). Attempts were made to discredit the HMA and the Coalition by declaring that our efforts were motivated by political self-interest.....a time honored tactic of drawing attention away from the issues when the issues have little merit. Indeed, if any organization could be accused of self-interest, it was not us.

We are appreciative of the large amount of feedback we received from membership, most in support of our actions. However, we did receive criticism from three physicians, one who serves on the HMSA Board of Directors and another who is conflicted because he is a board member of a corporation involved in a joint venture with HMSA. These isolated comments were far outweighed by the numerous letters, faxes, and phone calls we received encouraging us to continue opposition to the amendments.

It is important to say here that this year the HMA will continue to tackle tough and controversial issues, and we will continue to take a proactive position in areas of patient advocacy. For, if we fail to do so, we will lose our *raison d'être* and the trust our patients place in us to work for their best interests.

I would encourage every member who is interested, to get involved with this and other issues, by coming to the Executive Committee meetings held weekly or the Council meetings held monthly. Your officers and commissioners are volunteers and "regular" doctors just like you. What you as an individual member can derive as a benefit of membership is directly related to what efforts you contribute toward our association. HMA's ultimate success is truly a result of the collective efforts of individual members. At minimum, please call or fax your comments to us.



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Commentary

What's New in Medical Communication?

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Advances are happening fast in the medical communications field. Some we now take for granted; others we've only heard about; and there are those we cannot even conceive of as possible, yet these new modes are either already in operation or soon will be!

Ten years ago, I wrote an article published in the Hawaii Medical Journal, *Is a "Fax" in Your Future?*¹ In it, I suggested that physicians consider a facsimile unit for their office, laboratory or perhaps even the home.

In the December 3, 1987 issue of Pacific Business News, a headline stated "it's hard to find an office that lacks a fax." That report referred to nonmedical offices. A year later, there were very few solo medical and small group practices in Hawaii that had fax units. Only one major medical clinic, Straub, in Honolulu had a fax. The Hawaii Medical Library was then planning to install one. Today, the fax is almost as common as the telephone.

We have come a long way since Rockwell International Corporation first developed facsimile technology in the late 1960's: from the thermal paper (that turned brown so quickly) to the modern plain paper units. Today faxes are faster, with sharper print, and cost effective. Most still print with black ink, but the color fax is also available.

Medical Communication is so vast a field of interest that it could easily warrant a textbook. Soon the subject will be a Special Issue of the Hawaii Medical Journal, but in this paper, we review how medical communication has progressed within the past decade.

The medical office / clinic / home / car

Telephones—very few offices now have only one telephone line. The phone companies in Hawaii can provide various types of rotating lines, including in-office communications, paging systems, call waiting, caller identification, conference call capabilities, and even two-way video telephones. Styles and colors of phone units are unlimited.

Telephone message machines are useful, but can be frustrating; a simple recording indicating office hours, out to lunch, or to call Dr. X who is covering for you, can certainly be helpful. A more extensive recording indicating the virtues and services of your office has many advantages too, when done professionally. Voice mail, requiring a directory of every employee, nurse, and additional personnel, is time-consuming, often culminating in a recording indicating "I am either on the phone or out of the office. Please leave a message."

Car phones used to be expensive to purchase or lease, and they required special installation. Now, hands-free car phones with push-button rapid dialing are more affordable and far safer when driving than previous alternatives.

Cellular telephones are lighter, smaller, and so affordable that many physicians carry a "cell" phone in addition to their pager. It's practical and safe for a spouse and children to carry their own cell phones.

Pagers are ubiquitous with dozens of varieties available from numerous answering services in Hawaii. Digital, vibratory, alpha-numeric and voice pagers cater to individual needs. Island-wide, statewide, and worldwide paging is available in Hawaii.

The Startel Telephone Answering System used by the Physicians Exchange of Honolulu has such a variety of features that I can only indicate a few here. After office hours, the Exchange picks up calls made to the office. Urgent calls are relayed by voice pager. Every call is answered and a message entered into the computer and time-stamped, as well as all processes made to relay the call. The next morning, all completed messages are faxed to the office. (Fig. 1). Messages are retained for seven years. In addition, all calls answered and made from the Exchange are automatically recorded into their voice recording system. These taped recordings are also retained for seven years. The Exchange also acts as a communications center (Fig. 2) and contact for burglary and fire alarm systems in homes and offices. The Exchange is a subsidiary of the Honolulu County Medical Society. A brief tour of the Exchange is a real "eye-opener" as to what is available in pager service, and I recommend that every physician visit their offices on Beretania Street.

Desktop equipment is user-friendly now with many special features depending on office/clinic/hospital needs. Magnetic tapes remain favorites and are economical. Equipment companies can install wiring, from exam rooms and consultation rooms, directly to the Secretary/Transcriber.

Portable dictation equipment has become even more portable. A small hand-held, pocket-sized unit can easily record an hour-long dictation or a lecture.

Computer programs are available in foreign language formats. This will undoubtedly become more popular as pricing is reduced. Hawaii will be the perfect testing laboratory to develop these multi-lingual programs.

Some dictation equipment companies, notably Dictaphone, are set up to enable the physician to dictate directly to the Secretary via phone from home, car, office, and the cell phone. It works very well, and saves time.

Voice-activated computers: For those who cannot or prefer not to type, the wonder of all office computer devices is the voice-activated dictating device. Several years ago, a demonstration of voice-activated computers was held in Honolulu. At that time, I was very unimpressed. The system required a great deal of training, advanced computer knowledge and, most importantly, it meant speaking very s-l-o-w-l-y as the unit learned your speech patterns and dialect.

Today the DragonDictate/NaturallySpeaking equipment enables users to speak to the computer in a natural way and at a normal pace with no need to pause between words. It has an active vocabulary of 30,000 words and up to 200,000 words in backup disc dictionaries. This manuscript is being entered and typed by my voice-activated computer, then finalized by a (highly overqualified) transcriber.

Tapes and Disks: the dinosaurs of recorded sound, the "78", "45" and LP records are still around, valued by collectors, but magnetic audio tapes have all but replaced them. Continuing Medical Educa-

Fig 1.— Sample of fax record of phone calls made to the office. Messages received by the Physicians Exchange operators and sent to physician at 7:15 AM next day.¹

In: 7:15a SAT OCT- 5 BW	In: 5:05p FRI OCT- 4 EV	In: 12:42p SAT OCT- 5 PH
Out: 7:34a SAT OCT- 5 BW GOL 0:16	Out: 7:34a SAT OCT- 5 BW GOL 0:51	Out: 12:42p SAT OCT- 5 PH GOL 0:41
For: GOLDSTEIN *RELAY @ 7:30AM*	For: GOLDSTEIN *RELAY OFC IN AM*	For: GOLDSTEIN
From:	From:	From: FEMALE CLR
Tel#:	Tel#:	Tel#: G/O LOC INFO
Msg: WANTS TO CHECK THE TIME OF	Msg: WANTS APPT FOR SAT OCT 5	Msg: WILL CL BK ON MON
APPT THIS MORNING	* 7:34a SA OCT-05 BW OFC MARIE	
* 7:33a SA OCT-05 BW OFC MARIA TK		
In: 12:54p SAT OCT- 5 BW	In: 12:58p SAT OCT- 5 Gin	In: 12:50p SAT OCT- 5 FKD
Out: 12:55p SAT OCT- 5 BW GOL 0:24	Out: 12:59p SAT OCT- 5 Gin GOL 0:22	Out: 1:07p SAT OCT- 5 BW GOL 1:29
For: GOLDSTEIN	For: GOLDSTEIN	For: GOLDSTEIN
From:	From: LONGS PALI/	From:
Tel#:	Tel#: WL CL OFG MONDAY	Tel#:
Msg: REF BY	Msg:	Msg: DTR MEDS
WW & CL BK MON - WANTS TO SCHEDULE		*12:56P SA OCT-05 FKD INFORM CLR RE
AN APPT		M/C INSTR NA @#
		* 1:07p SA OCT-05 BW CI
		CI WITH NEW LOC #- ABOVE #
		IS HER RES/SHE IS NOT THERE - SEE NEXT
		MSG
In: 1:04p SAT OCT- 5 BW	In: 1:40p SAT OCT- 5 FKD	In: 3:01p SAT OCT- 5 Gin
Out: 1:11p SAT OCT- 5 Gin GOL 0:02	Out: 1:40p SAT OCT- 5 FKD GOL 0:11	Out: 3:07p SAT OCT- 5 Gin GOL 0:42
For: GOLDSTEIN	For: GOLDSTEIN	For: GOLDSTEIN
From:	From: FEMALE CLR	From:
Tel#:	Tel#: INFORMED TO CL OFC FOR APPT	Tel#:
Msg: RX REFILL/DTR /WANTS	Msg:	Msg: SHOT HE GOT YESTERDAY DIDN'T
RX REFILL - CLR CLAIMS EMER		HELP THE ITCH
* 1:07p SA OCT-05 BW PAGER VP/PE		* 3:02p SA OCT-05 Gin PAGER VP/PE
* 1:11p SA OCT-05 Gin CI DRTK		* 3:07p SA OCT-05 Gin CI DR TK

tion programs on tape are available for all medical specialties. At home, in the office, and in the car, they continue to provide up-to-date medical information. The same can be said for videotapes, which provide patient information in offices and hospitals. The Compact Disc (the ubiquitous "CD") is now usurping the audio and video tape market, though tapes will probably remain a major educational/instructional medium for another generation. The CD-ROM's varied uses in medicine, entertainment and communication in general are easy-to-use, easy to mail, and economical. Now, interactive CD's and Laser Discs are happening.

Another use for the compact disc includes storage of basic medical records which must be retained for the life of the patient. Storage space for standard files is increasingly expensive for records, photos, and X-rays, which can now be transferred to CD's. It's not cost-effective at this time, but as the technology improves, undoubtedly charts and records will be retained on CD's.

The Medical Library

Any dissertation on medical communication must include the Library. Here are a few statistics: the Hawaii Medical Library receives more than 18,000 books and journals in an average year. Twenty-nine thousand books and journals were loaned in 1996.

Between July 1996 and June 1997, more than 124,000 "searches" were done on the Library's web site. The Web continues to expand exponentially as a major method of information transfer. Information skills are taught by the reference library staff, providing a formal class setting which includes the Internet, MEDLINE and other database searches. For those who cannot spare the time to go to the Library, the H.M.L. reference staff will provide reprints via the mail or by fax for a modest fee.

The Library is also home to the Consumer Health Information Service (CHIS). This new service provides health information resources to enable consumers, (patients and families) to make informed health care decisions. Call the Library and ask for the CHIS brochure for distribution to your patients. Then stop in to see the improved facilities at the Hawaii Medical Library – the **Fore-front of Medical Communication in Hawaii.**

Medical Communications in Our Hospitals

In preparation for this manuscript segment, I contacted the hospital Directors of Communications and Computer Directors. They inundated me with materials on what's happening today in the communications field in our Hawaii hospitals.

Fig 2.— Physicians Exchange Communication Center. At peak hours, seven operators are kept busy. The Center is located in the Hawaii Medical Association Building on Beretania Street.



At Kapiolani Medical Center, for example, they have a new telecommunication system, "catapulting them into the 21st Century!" From voice mail to simplified four-digit dialing to programmable speed calls to ringer choice, etc., etc. for their more than 800 phones and 275 fax machines and modems.² Telecommunications are here, not just at Tripler Army Medical Center,³ but the entire world. Two-way video consultation programs doubled in the U.S. from 38 in 1995 to 69 in 1996. Interactive clinical consultations of all types showed a 300% increase from 6,134 to 19,380. According to *Telemedicine Today* magazine, this has increased even more in 1997.⁴

The World Wide Web has opened up medical communications in our hospitals, clinics, offices and homes—as well as those of our patients. Space here does not permit further explanation of the explosion in medical communications through the Web at this time. Look for the Special Issue of the *Hawaii Medical Journal* for more information in 1999.

Conclusion

Communication, in medicine and in general, is at its heart between people. From papyrus to paper, from audio and video to CDs and Laser Disks, we as physicians must always remember that eye to eye verbal communication is still, and

always will be, the best and most consoling means of bonding with our patients, our friends.

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Editor's Note:

This manuscript first appeared in the April 1998 Proceedings of the Straub Foundation's "What's New in Medicine in Hawaii". As you will read, there are many new treatments, procedures, specialties and medical services available in Hawaii now.

Forty-two manuscripts were contained in the Proceedings, and while most of the papers were written by Straub physicians, several came from other leaders in the country. The papers are uniformly well written, especially for the medical generalist.

Bo Eklof, MD, PhD, medical director of the Straub Foundation and Editor of the Proceedings made a noteworthy effort in detailing what's new and promising in the Hawaii medical community. Limited copies of the Proceedings may still be available at the Foundation office (524-6755) and at the Hawaii Medical Library.

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Harry L. Arnold Jr. MD Case of the Month

Gradual Loss of IgG Antibodies Against GB Virus C/Hepatitis G Virus in a Patient With AIDS

Vivek R. Nerurkar, PhD*, Pong K. Chua, BS*,
Cecilia M. Shikuma, MD**, Wan-Mohaiza Dashwood, BS*,
Chris I.P. Milne, RN**, Cora L. Woodward, BS*, Glenn
Kobayashi, BS***, Jon E. Peterson, PhD****
and Richard Yanagihara MD*

GB virus C/hepatitis G virus (GBV-C/HGV) is a positive-sense, single-stranded RNA virus belonging to the family Flaviviridae and is distantly related to hepatitis C virus (HCV).¹⁻³ GBV-C/HGV can be transmitted by the parenteral and the sexual route.^{1, 4} Among individuals infected with human immunodeficiency virus type 1 (HIV-1) by the sexual route, we and others have demonstrated a high prevalence of GBV-C/HGV infection.⁵⁻⁸ Recently, Woolley and colleagues reported that AIDS patients co-infected with GBV-C/HGV had a significantly lower mean CD4 cell count than AIDS patients without GBV-C/HGV infection,⁹ suggesting that GBV-C/HGV antibody may be lost with progression to AIDS. To our knowledge no data are available on the loss of antibody against GBV-C/HGV in AIDS patients. We now report on an HIV-infected patient who exhibited gradual loss of IgG antibodies against GBV-C/HGV, as well as HCV, with progression of HIV disease.

Case Report

A 35-year-old Caucasian woman, presumed to have been infected by injection drug use (IDU) with HIV subtype B in 1994, was first seen in October 1995 in our Women's Clinic, which provides medical and psychosocial services to HIV-infected women. At the initial visit, CD4 and CD8 counts were 197 and 435 X 10⁶ cells/L,

respectively. Plasma was negative for GBV-C/HGV and HCV RNA, as determined by reverse transcription-polymerase chain reaction (RT-PCR) using oligonucleotide primers spanning 377-bp and 257-bp of the 5'-untranslated region of GBV-C/HGV and HCV, respectively.⁸ However, plasma was positive for IgG antibodies against GBV-C/HGV and HCV, as measured by enzyme-linked immunosorbent assay (ELISA), with optical density (OD) readings of 1.14 and 2.60, respectively. Hepatitis B virus surface antigen and core antibody were also detected, and liver enzyme levels were abnormal: alanine aminotransferase, 71 IU/L; aspartate transaminase, 118 IU/L; gamma glutamyl transferase, 73 IU/L; and alkaline phosphatase, 294 IU/L. Low-grade squamous intraepithelial lesion (SIL) found on initial visit progressed to high-grade SIL in April 1997, and human papillomavirus 18 was detected by PCR in cervicovaginal lavage cells.

In April 1996, she was diagnosed with *Mycobacterium avium* complex and esophageal candidiasis, and in August 1996, HIV RNA burden was 230,290 copies/mL (Amplicor HIV-1 Monitor Test, Roche Diagnostic System, Somerville, NJ) with CD4 and CD8 counts of 48 and 145 X 10⁶ cells/L, respectively. In October 1996, highly active antiretroviral therapy (HAART) was started with the addition of Indinavir to D4T and 3TC. The patient was noncompliant to HAART and in February 1997, cytomegalovirus-associated retinitis was diagnosed in her right eye. A month later, HIV RNA burden was 152,967 copies/mL with CD4 count of 26 X 10⁶ cells/L. In April 1997, with increasing compliance to HAART, her HIV plasma viral RNA decreased to 27,334 copies/mL, with CD4 and CD8 counts of 160 and 217 X 10⁶ cells/L, respectively. HIV RNA viral load was 230,000 copies/mL in September 1997. In October 1997, non-Hodgkin's lymphoma and HIV-associated myelopathy were diagnosed with a CD4 count of 22 X 10⁶ cells/L, after which her health deteriorated rapidly, and she died in January 1998. At autopsy, blood and peritoneal fluid were collected.

Plasma collected over a 27-month period were tested in triplicate by ELISA for IgG antibodies against GBV-C/HGV (Ortho HGV CHOe2 ELISA Test System, Ortho Clinical Diagnostics, Raritan, NJ), HCV (Ortho HCV Version 3.0 ELISA Test System, Ortho Clinical Diagnostics) and HIV (Genetic Systems HIV-1/2 EIA, Genetic Systems Corp., Redmond, WA). In addition, plasma were assayed for reactivity to HIV proteins by Western blot analysis (HIV-1 Western Blot Kit, Cambridge Biotech Corp., Rockville, MD). To assure comparability, all plasma specimens were tested by the above-mentioned assays at the same time. As seen in Fig. 1, the patient lost IgG antibodies against GBV-C/HGV and HCV (positive cutoff value, OD 0.6) between 18 to 20 months after the initial visit, and the OD readings were 0.07 and 0.03, respectively, in the plasma sample collected at autopsy.

Discussion

As a result of HIV-1-induced severe immunosuppression, depressed humoral and cellular immunity has been documented to specific parasitic,¹⁰⁻¹² bacterial¹³⁻¹⁴ and viral^{11, 15-16} agents. Significantly lower levels of IgG, IgM and IgA antibodies to *Giardia lamblia* were demonstrated in AIDS patients with acute giardiasis.¹² Loss of humoral immune response to *Pneumocystis carinii* in AIDS patients when compared to other immunosuppressed patients or immunocompetent controls has been documented.^{13, 17} Moreover,

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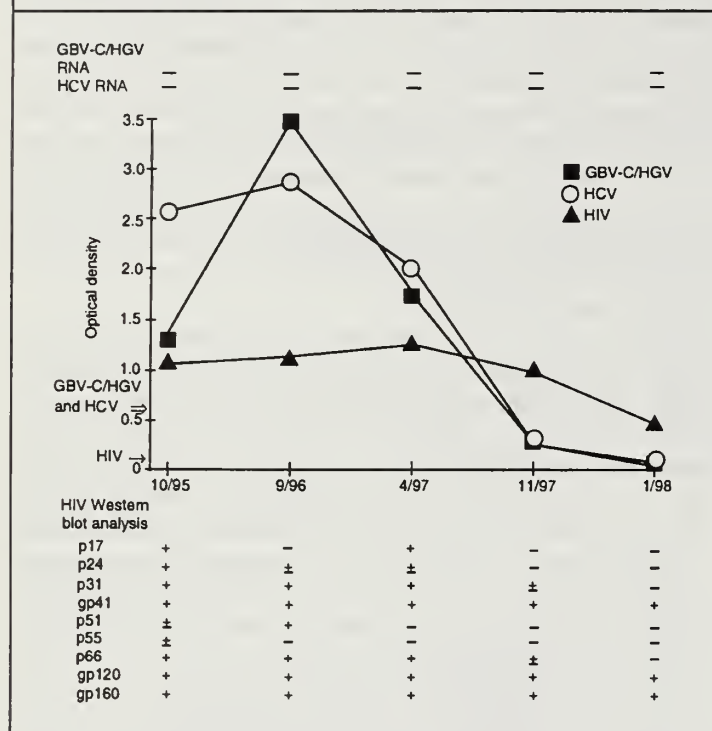
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Fig. 1.— Longitudinal analysis of IgG antibody response to GBV-C/HGV, HCV and HIV, as measured by ELISA and Western blot in an AIDS patient. Reactivity to HIV proteins is indicated: positive, +; negative, -; indeterminate, \pm . ELISA cutoffs were OD 0.6 (\Rightarrow) for GBV-C/HGV and HCV, and OD 0.2 (\rightarrow) for HIV.



progressive loss of IgG antibodies against *Chlamydia pneumoniae* has been demonstrated in middle to advanced stages of HIV-1 infection.¹⁴

In a study of 95 HIV-1-infected individuals (45 asymptomatic and 40 with AIDS), Radkowski and coworkers¹¹ demonstrated lower antibody titers to hepatitis B surface antigen, rubella virus and cytomegalovirus in AIDS patients when compared to asymptotically infected individuals. Similarly, a population-based study of measles and measles immunization in HIV-1-infected children demonstrated loss of anti-measles antibody over time in older children and a statistically significant correlation between lower CD4 counts and measles-mumps-rubella vaccine nonresponsiveness.¹⁶ Finally, time-dependent HCV seroreversion has been reported in a cohort of HIV-1-infected IDU.¹⁵

Loss of seroreactivity to specific HIV-1 epitopes has also been reported. Up to a 100-fold greater affinity to HIV-1-specific p24 and p17 proteins has been found in asymptomatic HIV-1-infected individuals than in AIDS patients,¹⁸ suggesting that those who develop

AIDS either lose or fail to develop high-affinity antibodies early in the infection. These data also demonstrate that the presence of low-affinity antibody and the progressive reduction in titer of specific antibodies are better predictors of disease onset than CD4 cell count. Moreover, antibodies against HIV-1 p24 is undetectable in 45% of individuals by the time of AIDS diagnosis.¹⁹ Although the patient reported here did not exhibit a dramatic drop in IgG antibodies to HIV-1 as measured by ELISA, during the last 3 months before death, there was a gradual loss of reactivity to HIV-1 gag-encoded proteins, as determined by Western blot analysis (Fig. 1).

In conclusion, as seen in other opportunistic infections associated with AIDS, AIDS patients co-infected with GBV-C/HGV may similarly lose anti-GBV-C/HGV antibodies during progression to AIDS.

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Interferon Alpha-2b in the Treatment of Chronic Hepatitis C: Early Experience

Nathaniel P.H. Ching MD *, James Lumeng MD **, Ronald Pang MD **, Glenn Pang MD **, Fung Wa Or MPH***, Natascha W.H. Ching MD, and Clara Ching PhD ***

The antiviral and immunomodulatory effects of interferon were assessed in the treatment of chronic Hepatitis C in multi-ethnic patients to prevent viral replication and chronic liver damage. Three million units of recombinant interferon alpha-2b were administered three times a week for 48 weeks to a group of 9 active Hepatitis C patients. A clinical response was defined as normalization of serum ALT values. Serum was frozen and stored for Hepatitis C viral assays. Four patients normalized their liver functions. When viral levels were measured only two patients had unmeasurable levels of HCV RNA after treatment. Therapeutic results were observed and much work needs to be done to improve therapy because a serious epidemic is predicted for the future.

Introduction

The Federal Drug Administration approved Interferon alpha-2b for the treatment of chronic Hepatitis C in February 1991. The Hepatitis C antigen was identified in 1989 and an antibody test developed soon thereafter; prior to this, Hepatitis C was referred to as Non-A Non-B Hepatitis. Interferon has been shown currently to be the most effective therapy in approximately 30 to 40% of chronic Hepatitis C patients¹⁻³ because of its antiviral and immunomodulatory effects. The reports leading to FDA approval looked promising so interferon therapy was utilized for our patients soon after FDA approval and forms the basis for this report of our early experiences. Our group was referred the Hepatitis C Virus (HCV) cases for treatment because of our experience in a research project to treat chronic Hepatitis B patients.⁴

Chronic Hepatitis B is a major public health problem in Hawaii because of the large immigrant population from Asia and the Pacific Basin. Exposure to Hepatitis B virus (HBV) often results in chronic Hepatitis that can significantly increase the risk of developing cirrhosis and hepatocellular carcinoma. Hepatitis C can develop into these same fatal complications. The recent NIH Consensus Conference on Hepatitis C notes that 4 million people in the United States are currently infected with HCV with about 30,000 new cases a year with the numbers to double or triple in the next 20 to 30 years.⁵ It will be a major public health problem until an effective therapy and vaccine can be developed.

Materials and Methods

Patient Population

Patients testing positive for the first generation HCV antibody test (Ortho Diagnostics, New Jersey) and negative for Hepatitis B antigens or antibodies were referred for evaluation for treatment. Patients with elevated liver function tests, primarily ALT $\geq 1.5X$ high normal level for over 6 months, were then selected for treatment according to the FDA approved protocol. Patients were excluded if they showed evidence of cirrhosis as reflected in their alkaline phosphatase levels. Informed consent was obtained.

Interferon Therapy

Chronic active Hepatitis C patients were treated with recombinant interferon alpha-2b (Intron-A, Schering-Plough Corporation, Kenilworth, NJ). Three million units were administered subcutaneously 3 times per week for 48 weeks. If there was no clinical response, another 48 week course was offered. Patients received their injections in the Ambulatory Oncology Clinic or chose to voluntarily self-administer their medication after training by the Oncology Nursing Staff. The dose was reduced to 1-2 million units when platelets were $<100,000$ or granulocytes were <1000 .

Evaluation During Therapy

Patients were evaluated during therapy for hematological and biochemical profiles. Blood was collected for complete blood and platelet counts and liver function tests (LFTs) including serum alanine and aspartate aminotransferase and gamma glutamyl transpeptidase activities (ALT, AST, GGPT) prior to therapy, after 2 weeks, monthly during therapy and 2-3 months post therapy. Liver function tests were performed by Immunoassay (EIA) (Abbott Laboratories, Abbott Park, IL). All evaluations were performed by the same Clinical Laboratory. A clinical response was defined as normalization of ALT levels.

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Hepatitis C Virus (HCV) Assay

Aliquots of serial serum samples from each patient were drawn at baseline, 2-3 month intervals during therapy, the end of therapy and 2-3 months following therapy and stored at -70°C for analysis when more specific viral tests were available. The first generation test for HCV antibody was performed in the clinical laboratory. Sera drawn during therapy were frozen for later batch analysis for HCV-RNA by reverse transcription-polymerase reaction (RT-PCR) by Lawrence Lumeng MD, Department of Gastroenterology, Indiana University School of Medicine. RT-PCR analysis for the 256BP and 157BP regions confirmed the diagnosis of HCV but it was only semi-quantitative.

Branched HCV RNA analysis was performed by Reference Laboratory Alliance (Pittsburgh, PA).⁶ HCV-RNA is quantifiable at levels $>3.5 \times 10^5$ Eq/ml but is not FDA cleared for diagnostic use and may not constitute the sole basis for patient diagnosis. HCV-RNA in a patient's sample is captured and hybridized to several target probes corresponding to the conserved 5' nontranslated region of HCV. Amplification of signal from the hybridizations is achieved by addition of branched DNA molecules which can bind multiple copies of enzyme emitted and measured by a luminometer. Concentrations of viral target in individual specimens were determined by comparison with a standard curve.

HCV genotype determination was performed on the baseline samples by RT-PCR at Reference Laboratory Alliance (Pittsburgh, PA). The INNO-LIPA (line probe assay) is a reverse hybridization for the differentiation of the various HCV genotypes. DNA representing a sequence from the 5' nontranslated region was amplified using biotinylated primers. Amplified DNA was hybridized to specific oligonucleotide-probes immobilized on membrane strips. Hybridizations were visualized by reaction of alkaline phosphatase, bound to amplified DNA, with chromogenic substrate. The pattern of reactivity of a simplified fragment with one or more lines upon the test strip allows recognition of five major HCV genotypes (Genotype 1-5) and 6 subtypes (1a, 1b, 2a, 2b, 3a, 3b).

Statistical Analysis

Results are expressed as arithmetic mean \pm SD except where noted. Data was analyzed with the Sigma Stat program (Jandel Scientific, San Rafael, CA). Continuous variables were analyzed by linear regression or Analysis of Variation (ANOVA) techniques. The IBM 55SX -PS2 computer was used for the analysis.

Results

Study Population

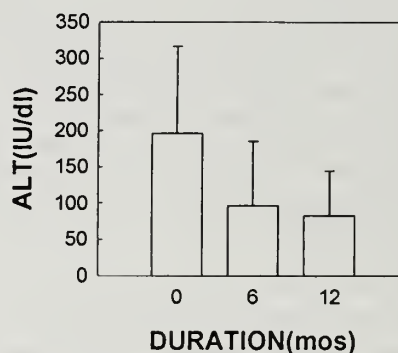
Eleven patients were referred for evaluation for treatment; one patient did not qualify because of associated Hepatitis B involvement and evidence of cirrhosis. One of the remaining ten patients was a young patient from a drug rehabilitation program who ran away from his program and did not return for further treatment after his first injection. The remaining nine patients treated ranged in ages of 35-69 years; 6 of the 9 were males. Baseline liver function tests (ALT, AST and GGPT) were increased in the patients: ALT = 195 ± 121 IU/L, AST = 111 ± 64 IU/L, GGPT = 115 ± 109 IU/L. The risk factors identified for Hepatitis C were blood or blood products transfusion (3) and confessed unspecified drug usage (2); no history of any other recognized risk factor was obtained from the remaining

4 patients. There was only one foreign born patient (Korea); the remaining patients were from Hawaii, Guam or the mainland US.

Toxicity

Patients initially experienced flu-like symptoms, including myalgia, headache and fever which generally improved after the first week or two of therapy; one patient (#905) had severe constitutional symptoms which responded to dose reduction. The nine patients tolerated their regimens and completed therapy. One patient (#934) required dose reductions due to decrease in wbc's and platelets.

Fig 1.— Changes in ALT levels of chronic active Hepatitis C patients on interferon therapy, $\bar{X} \pm \text{SD}$. Elevated levels at baseline decreased but not to normal levels in all patients.



Biochemical Liver Function Tests

ALT levels decreased in all patients during treatment, $P < .05$ (Fig 1), but only 4 patients normalized their ALT levels. One patient, #905, who was infected after blood transfusion had normalized her liver function tests after the first 6 months of treatment; she flared to exceptionally high levels of ALT and was started on another course of treatment. She responded to another 6 months of therapy with continued normal liver function tests thereafter. The patients who did not normalize had continued elevated levels or increased after cessation of therapy.

Hepatitis C Virus (HCV) Assay

All patients were confirmed for the presence of HCV by PCR analysis. Serial analysis during treatment of the patients only demonstrated the disappearance of both BP256 and BP157 markers in one patient, again #905, demonstrating eradication of the virus. This patient had flared her LFTs and required a second course of treatment.

Baseline levels of branched HCV RNA analysis ranged from 8.4-862.7 10^5 Eq/ml. The 4 patients who normalized their LFTs had baseline levels of 8.4, 26.6, 66.9 and 108.2 10^5 Eq/ml. Only two of the four patients developed unmeasurable levels of HCV RNA after therapy whose baseline levels were 8.4 and 26.6 respectively. The lower baseline levels of HCV RNA may possibly predict a better response.

HCV genotype analysis demonstrated a preponderance of genotype 1, 7/9 patients. There was only single incidences of type 2 and



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The antimicrobial action may be attributable to inhibition of microbial cellular protein synthesis. A normalization of keratinization leading to an anticommedonal effect of azelaic acid may also contribute to its clinical activity. Electron microscopic and immunohistochemical evaluation of skin biopsies from human subjects treated with AZELEX[®] demonstrated a reduction in the thickness of the stratum corneum, a reduction in number and size of keratohyalin granules, and a reduction in the amount and distribution of filaggrin (a protein component of keratohyalin) in epidermal layers. This is suggestive of the ability to decrease microcomedo formation. **Pharmacokinetics:** Following a single application of AZELEX[®] to human skin *in vitro*, azelaic acid penetrates into the stratum corneum (approximately 3 to 5% of the applied dose) and other viable skin layers (up to 10% of the dose is found in the epidermis and dermis). Negligible cutaneous metabolism occurs after topical application. Approximately 4% of the topically applied azelaic acid is systemically absorbed. Azelaic acid is mainly excreted unchanged in the urine but undergoes some β -oxidation to shorter chain dicarboxylic acids. The observed half-lives in healthy subjects are approximately 45 minutes after oral dosing and 12 hours after topical dosing, indicating percutaneous absorption rate-limited kinetics. Azelaic acid is a dietary constituent (whole grain cereals and animal products), and can be formed endogenously from longer-chain dicarboxylic acids, metabolism of oleic acid, and ω -oxidation of monocarboxylic acids. Endogenous plasma concentration (20 to 80 ng/mL) and daily urinary excretion (4 to 28 mg) of azelaic acid are highly dependent on dietary intake. After topical treatment with AZELEX[®] in humans, plasma concentration and urinary excretion of azelaic acid are not significantly different from baseline levels. **INDICATIONS AND USAGE:** AZELEX[®] is indicated for the topical treatment of mild-to-moderate inflammatory acne vulgaris. **CONTRAINDICATIONS:** AZELEX[®] is contraindicated in individuals who have shown hypersensitivity to any of its components. **WARNINGS:** AZELEX[®] is for dermatologic use only and not for ophthalmic use. There have been isolated reports of hypopigmentation after use of azelaic acid. Since azelaic acid has not been well studied in patients with dark complexions, these patients should be monitored for early signs of hypopigmentation. **PRECAUTIONS: General:** If sensitivity or severe irritation develop with the use of AZELEX[®], treatment should be discontinued and appropriate therapy instituted. **Information for patients:** Patients should be told: 1. To use AZELEX[®] for the full prescribed treatment period. 2. To avoid the use of occlusive dressings or wrappings. 3. To keep AZELEX[®] away from the mouth, eyes and other mucous membranes. If it does come in contact with the eyes, they should wash their eyes with large amounts of water and consult a physician if eye irritation persists. 4. If they have dark complexions, to report abnormal changes in skin color to their physician. 5. Due in part to the low pH of azelaic acid, temporary skin irritation (pruritus, burning, or stinging) may occur when AZELEX[®] is applied to broken or inflamed skin, usually at the start of treatment. However, this irritation commonly subsides if treatment is continued. If it continues, AZELEX[®] should be applied only once-a-day, or the treatment should be stopped until these effects have subsided. If troublesome irritation persists, use should be discontinued, and patients should consult their physician. (See ADVERSE REACTIONS.) **Carcinogenesis, mutagenesis, impairment of fertility:** Azelaic acid is a human dietary component of a simple molecular structure that does not suggest carcinogenic potential, and it does not belong to a class of drugs for which there is a concern about carcinogenicity. Therefore, animal studies to evaluate carcinogenic potential with AZELEX[®] Cream were not deemed necessary. In a battery of tests (Ames assay, HGPRT test in Chinese hamster ovary cells, human lymphocyte test, dominant lethal assay in mice), azelaic acid was found to be nonmutagenic. Animal studies have shown no adverse effects on fertility. **Pregnancy: Teratogenic Effects: Pregnancy Category B.** Embryotoxic effects were observed in Segment I and Segment II oral studies with rats receiving 2500 mg/kg/day of azelaic acid. Similar effects were observed in Segment II studies in rabbits given 150 to 500 mg/kg/day and in monkeys given 500 mg/kg/day. The doses at which these effects were noted were all within toxic dose ranges for the dams. No teratogenic effects were observed. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed. **Nursing Mothers:** Equilibrium dialysis was used to assess human milk partitioning *in vitro*. At an azelaic acid concentration of 25 $\mu\text{g/mL}$, the milk/plasma distribution coefficient was 0.7 and the milk/buffer distribution was 1.0, indicating that passage of drug into maternal milk may occur. Since less than 4% of a topically applied dose is systemically absorbed, the uptake of azelaic acid into maternal milk is not expected to cause a significant change from baseline azelaic acid levels in the milk. However, caution should be exercised when AZELEX[®] is administered to a nursing mother. **Pediatric Use:** Safety and effectiveness in pediatric patients under 12 years of age have not been established. **ADVERSE REACTIONS:** During U.S. clinical trials with AZELEX[®], adverse reactions were generally mild and transient in nature. The most common adverse reactions occurring in approximately 1-5% of patients were pruritus, burning, stinging and tingling. Other adverse reactions such as erythema, dryness, rash, peeling, irritation, dermatitis, and contact dermatitis were reported in less than 1% of subjects. There is the potential for experiencing allergic reactions with use of AZELEX[®]. In patients using azelaic acid formulations, the following additional adverse experiences have been reported rarely: worsening of asthma, vitiligo depigmentation, small pigmented spots, hypertrichosis, reddening (signs of keratosis pilaris), and exacerbation of recurrent herpes labialis. **DOSEAGE AND ADMINISTRATION:** After the skin is thoroughly washed and patted dry, a thin film of AZELEX[®] should be gently but thoroughly massaged into the affected areas twice daily, in the morning and evening. The hands should be washed following application. The duration of use of AZELEX[®] can vary from person to person and depends on the severity of the acne. Improvement of the condition occurs in the majority of patients with inflammatory lesions within four weeks. **HOW SUPPLIED:** AZELEX[®] is supplied in collapsible tubes in a 30 gm size. 30 g - NDC 0023-8694-30. **Note:** Protect from freezing. Store between 15°-30°C (59°-86°F). **Caution:** Federal (U.S.A.) law prohibits dispensing without a prescription. Distributed under license, U.S. Patent No. 4,386,104.

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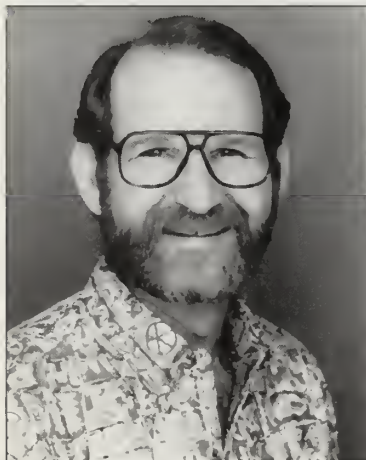
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type 3 genotype groups. Three of the four patients with a clinical response were type 1 or 1b and the fourth was type 3a; the complete responder was type 1b. The relationship of branched chain HCV RNA levels and genotype classification and clinical response is summarized in Table 1.

Discussion

We were able to achieve a clinical response in four out of nine patients completing therapy in this early utilization of Interferon alpha-2b therapy for Hepatitis C infection which is consistent with the results of other trials. However, the antiviral effect of interferon did not correspond to the clinical response; only two patients achieved unmeasurable levels of HCV RNA and only one of these two had no trace of HCV with the sensitive PCR analysis. Grecht et al⁶ report that high viremia titers were associated with advanced stages of the disease. Low baseline HCV RNA levels are reported by other investigators^{7,8} to be predictors of successful therapy, which may also be seen in some of our responders to interferon treatment.

In the United States, genotype 1 accounts for about 75% of chronic HCV infections with half belonging to the 1a subtype and half to the 1b subtype. Genotype 2 accounts for 10-20% of isolates in the US and genotype 3 for another 5% of isolates. The distribution of HCV genotype in our study group follows these reports. Genotypes 4, 5 and 6 are rarely seen in the USA and when identified usually represents infection acquired abroad. Studies have documented higher rates of long-term response to alpha interferon in patients infected with genotypes 2a, 2b, or 3a compared with genotype 1.⁸⁻¹¹ Chemello and Alberti¹² reports only 29% long term response for type 1, versus 52% for type 2 and 74% for type 3 patients. The predominance of type 1 virus in Hawaii demonstrates a lowered chance of successful therapy in our patients. In contrast type 2 predominates in the Japanese patients (69%) with 18 (%) Type 3; this gives them a greater probability of successful therapy than our population.¹³ One type 3 patient had a clinical response and developed unmeasurable levels of HCV RNA. The one complete responder to all three viral measurements was genotype 1b; three of four clinical responders were serotype 1b or 1. In this study the genotype of HCV did not aid in identifying probable responders except for one type 3 patient who had a low level of HCV RNA (8.4) at baseline.



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Table 1.—Viral Genotype, HCV-RNA and Clinical Response

Patient No.	Sex	Genotype	Clinical Response	HCV RNA ** Baseline	HCV RNA End
904	F	1	+	108.2	104.3
905*	F	1b	+	26.6	<3.4
910	M	1a	-	862.7	109.4
913	M	1	-	113.1	140.4
934*	M	1b	-	45.6	44.9
961	F	3a	+	8.4	<3.4
962	M	1a	-	186.9	19.4
963	M	1b	+	66.9	42.3
964	M	2b	-	113.1	34

*—Dose Reduction ** 10E + 5Eq/ml

Interferon still remains the only effective treatment for Hepatitis C infection at present. The optimal duration and dose may still need to be determined. Early trials suggested a better response at higher doses; it has been recommended that patients unresponsive to the standard dose be treated with higher doses.¹⁴ Bellary et al¹⁵ utilized a dose of 5 million units three times a week for 6 months and achieved a 59% reponse rate, but 50% of those with a total reponse had a relapse. Lindsay et al¹⁶ evaluated response rates of 3, 5, or 10 million units given thrice weekly for 12 weeks; those not responding after 12 weeks were then randomized to additional therapy at either the same or higher dose for an additional 12 to 36 weeks. They concluded that the initial response to interferon was not increased by treatment with higher doses of the drug; although marginal, the additional higher doses may still be worth the risk of intolerance to the medication. Vogel et al¹⁷ and Ferenci P et al¹⁸ in Austria reported improved response to doses up to 10 million units but there was varying intolerance to the medication. The treatment may also need to be extended for longer periods as well as an increase in dosage. The toxicity and expense of such regimens must be considered if this is contemplated. Poynard et al¹⁹ extended the interferon treatment randomly for another 12 months after their patients had been treated for 6 months. Those receiving the same dose for an additional 12 months demonstrated a higher percentage with complete ALT and liver histologic reponse.

This early trial reveals only a 4/9 clinical response to Interferon alpha-2b and only 2/9 developed unmeasurable levels of the Hepatitis C virus. Further trials are required since interferon is the only effective treatment at this time.

Acknowledgements

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cal Response Modifiers Research Staff are acknowledged for their dedication, cooperation and assistance during this interferon treatment protocol with our patients.

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The Effects of ArginMax, A Natural Dietary Supplement for Enhancement of Male Sexual Function

Thomas Ito MD*; Kaye Kawahara MD; Anurag Das MD, FACS***; Warren Strudwick MD****

This study examines the role of ArginMax, a natural daily dietary supplement, on male sexual function. 25 subjects diagnosed with mild to moderate erectile dysfunction were evaluated over a 4-week period while on ArginMax. Of the 21 subjects that completed the study, 88.9% improved in ability to maintain erection during sexual intercourse and 75.0% improved in satisfaction with their overall sex life. No significant side effects were noted.

Introduction

It has been reported in the literature that dietary supplementation with certain botanical extracts, vitamins, or amino acids have led to modest improvements in male sexual function. No studies, however, have examined a systematically designed combination of natural products for the enhancement of male sexual function. Based on the proposed and elicited mechanisms of various natural products in the literature, we postulated that a combination regimen (ArginMax) could provide a major impact in support of male sexual function. First, a review of the supporting literature.

It is well established that nitric oxide (NO) is the key mediator for the up-regulation of cGMP which in turn mediates erectile function.¹ L-arginine is the precursor of nitric oxide. The conversion of L-arginine to nitric oxide is mediated by nitric oxide synthase (NOS). Increasing tissue L-arginine levels results in the increase of NO and

cGMP.^{2,3} Supplementation with L-arginine has been shown to be sufficient to restore endothelial-derived nitric oxide production in many disorders in which endothelial-derived nitric oxide is reduced or impaired including impairment resulting from diabetes and hypercholesterolemia.⁴⁻⁸ Studies also point to the role of L-arginine as not only a substrate for NOS in the up-regulation of cGMP, but also acts to reduce cell-mediated breakdown of nitric oxide.⁹

The efficacy of Korean ginseng (Panax Ginseng) in treating erectile dysfunction was recently demonstrated in a randomized controlled clinical trial involving a total of 90 patients studied over 3 months, 30 each receiving placebo, trazadone, or ginseng.¹⁰ Ginseng was the most efficacious treatment with improvements measured in erectile parameters such as girth, libido, and patient satisfaction. Frequency of intercourse, ejaculations, and erections did not differ among groups. In a controlled study with 66 patients, Panax ginseng was demonstrated to increase spermatozoa count and motility, testosterone, DHT, FSH, and LH levels in 66 patients with fertility problems.¹¹ Ginsenosides (the primary active component of ginseng) have been shown to increase NO production in endothelial cells.¹²⁻¹⁴ One observed mechanism for increase in NO production is up-regulation of NOS activity by ginsenosides.¹⁴ The effects of ginsenosides on NO production has implications for improved sexual function, and may partly account for the aphrodisiac effect of Panax ginseng used in traditional Chinese medicine.

Ginkgo biloba is well established to facilitate microvascular circulation¹⁵ which may physiologically lead to improvement of erections. In addition to ginkgo biloba's ability to facilitate microvascular circulation, potentially benefiting erectile function through enhanced vascular blood flow, there is evidence that ginkgo biloba extract may also directly elucidate smooth muscle relaxation in the corpus cavernosum, likely via effects on the nitric oxide pathway.^{16,17}

B-complex vitamins are important to the activity of hundreds of enzymes and in energy metabolism. Low levels of circulating folate and vitamin B6 confer an increased risk of peripheral vascular disease,¹⁸ leading to potential reduction of erectile function.

Zinc is a fundamental mineral in the maintenance of human reproductive function. Low levels of serum zinc has been shown to cause sexual dysfunction and is associated with infertility in males.^{19,20} Zinc deficiency during growth periods results in lack of gonadal development in males.^{21,22} Zinc deficiency leads to depletion of testosterone and inhibition of spermatogenesis.²³ Zinc is also thought to help extend the functional life span of ejaculated spermatozoa.²³

Selenium has a key influence on spermatozoa numbers and motility. It is an essential element in normal spermatozoa develop-

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ment. Selenium is incorporated in the sperm mitochondria capsule and may thus affect the behavior and function of the spermatozoon.²⁴ It has been shown that dietary supplementation with selenium-vitamin E statistically significantly increases sperm motility, percent live, and percent normal spermatozoa.²⁵

It is well established that one of the key roles of seminal plasma is the protection of spermatozoa against reactive oxygen species.²⁶ In a study of 101 patients seeking consultation for infertility and 15 fertile donors, a strong inverse relationship was found between total reactive antioxidant potential in seminal plasma and infertility.²⁶

ArginMax (The Daily Wellness Company, Mt. View, CA) is a natural dietary supplement which incorporates a highly standardized combination of ginkgo biloba (24% flavone glycosides, 6% terpene lactones), Korean ginseng (Panax Ginseng-30% ginsenosides), American ginseng (Panax Quinquefolius- 5% ginsenosides), L-arginine, along with B-vitamins 6 and 12, folate, antioxidant vitamins A, C, E, thiamin, riboflavin, niacin, biotin, pantothenic acid, zinc, and selenium. ArginMax was developed as a dietary supplement to support male sexual fitness. This paper reports our findings of a clinical pilot study of male sexual function using ArginMax as a daily dietary supplement in a group of men with mild to moderate erectile dysfunction.

Method

We recruited male subjects with mild to moderate erectile dysfunction through various medical clinics. Interested participants were enrolled at a test center located in a urology clinic at a University of Hawaii affiliated teaching hospital (Kuakini Medical Center). Subjects were enrolled in a consecutive manner until 25 patients had been enrolled for this pilot phase of the study. All interested participants were allowed to enroll regardless of etiology of erectile dysfunction. Initial work up consisted of a detailed patient past medical history including history and etiology of erectile dysfunction, treatment and medication history, and a physical examination including blood pressure, height, and weight. The subjects were then instructed on the use and a regimen of ArginMax as a dietary supplement and were requested to fill out a baseline SFQ (Sexual Function Questionnaire). Subjects started a twice-per-day regimen of ArginMax, once in the morning upon waking and once in the evening at bedtime. A 4-week supply of ArginMax was provided. After completing the 4-week regimen, patients were instructed to complete a 4-week SFQ and return to the test center for follow-up evaluation and examination.

The SFQ (Sexual Function Questionnaire) was used as the primary test instrument. The SFQ is a self-administered questionnaire beginning with the validated IIEF (International Index of Erectile Function used with permission) test instrument designed to measure changes in erectile function and sexual function.²⁷⁻²⁹ Following the IIEF questions, the SFQ included questions regarding subject's activities, condition during the trial period, and quality of life.^{30,31}

Subject Group Profile At Baseline

Total number of subjects-	25
Age range-	40 - 77
Number hypertensive-	19
Number diabetes mellitus-	4

Study Results

Sexual Function Improvements as Measured By SFQ

Patient responses to SFQ variables at 4 weeks were compared to SFQ responses at baseline. A comparison analysis was performed for those subjects whose degree of erectile dysfunction were mild to moderate as characterized by a minimal baseline score of 2 in comparison to their 4 week score on the same SFQ variable. The results were then pooled, summarized, and evaluated to reflect the percentage of subjects with improvement in each of the SFQ variables. The following are our findings showing the two highest and two lowest SFQ variable results:

88.9% of subjects showed improvement in the ability to maintain erection during intercourse, as measured by the following SFQ variable:

Over the past 4 weeks, during sexual intercourse, <u>how often</u> were you able to maintain your erection after you had penetrated (entered) your partner?	0 = Did not attempt intercourse 1 = Almost never/never 2 = A few times (much less than half the time) 3 = Sometimes (about half the time) 4 = Most times (much more than half the time) 5 = Almost always/always
---	---

75.0% of subjects showed improvement in satisfaction with overall sex life, as measured by the following SFQ variable:

Over the past 4 weeks, how satisfied have you been with your overall <u>sex life</u> ?	1 = Very dissatisfied 2 = Moderately dissatisfied 3 = About equally satisfied and dissatisfied 4 = Moderately satisfied 5 = Very satisfied
--	--

20.0% of subjects showed improvement in number of orgasms, as measured by the following SFQ variable:

Over the past 4 weeks, when you had sexual stimulation <u>or</u> intercourse, how often did you ejaculate?	0 = No sexual stimulation/intercourse 1 = Almost never/never 2 = A few times (much less than half the time) 3 = Sometimes (about half the time) 4 = Most times (much more than half the time) 5 = Almost always/always
--	---

12.5% of subjects showed improvement in the number of times attempted intercourse, as measured by the following SFQ variable:

Over the past 4 weeks, how many times have you attempted sexual intercourse?	0 = No attempts 1 = One to two attempts 2 = Three to four attempts 3 = Five to six attempts 4 = Seven to ten attempts 5 = Eleven + attempts
--	--

Subjects Dropped

Of the 25 subjects enrolled, 21 were included in the scoring of the above shown results. Four (4) of the enrolled subjects were not included for the following reasons:

- Loss of sex partner resulting in major change in sexual activity. (1 subject)
- Did not complete study due to personal problems- unspecified. (1 subject)
- Did not complete 4 week regimen in entirety. (2 subjects)

Side Effects

Blood Pressure Changes: no significant change in blood pressure. Mean blood pressure at baseline: 135/82 (s.devs: 14.9/11.71). Mean blood pressure at 4-weeks: 139/85 (s.devs: 12.26/13.17).

No other significant side effects as noted. The following are net % of patients reporting increase or decrease of:

headaches:	4.8%
nausea:	-4.8%
stomach upset:	-14.3%
chest pain:	0%
dizziness:	0%
vision disturbance:	0%

Discussion

The role of natural dietary supplements for sexual health is an infrequently discussed yet extremely important subject. Our pilot study preliminarily addressed the role of a combinatorial natural product for the enhancement of male sexual health. The proposed mechanism by which ArginMax improves sexual health and erectile function is through increasing smooth muscle relaxation, enhancing vascular dilatation, and improving peripheral circulation. Based on review of the literature pertaining to the ingredients in ArginMax, it is likely that ArginMax enhances the NO-cGMP pathway by providing additional substrate for NOS, up regulating NOS activity, and decreasing the cell-mediated breakdown of cGMP. On a vascular level, ArginMax likely facilitates erectile function by increasing blood vessel dilatation and microvascular circulation.

It is important to recognize that this pilot study is a part of a larger scale ongoing clinical evaluation of the health effects of ArginMax. Although designed as an open-label, pilot study, the results of the SFQ survey demonstrate significantly greater improvements in variables relating to erectile function than in non-erectile function related variables. It is reasonable to conclude that if only a placebo effect was noted, all variables would be impacted in a similar fashion. The presence of major variations among the variables leads us to believe that there is a physiological effect at play. Our pilot study indicates that an expansion of our current study to a larger population with a placebo-controlled protocol is the logical next step in exploring the sexual function benefits of ArginMax.

It is important to recognize that as Americans develop an ever increasing interest in dietary supplementation and the concept of wellness, that the role of a supplement for one of the most important biological functions of life, sexual

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health, be clinically evaluated. After all, if we take a calcium supplement for our bones, and an aspirin for our blood, why not consider taking a supplement for our sexual health?

Conclusion

In a pilot clinical study of ArginMax (The Daily Wellness Company, Mt. View, CA), a natural daily dietary supplement developed to support male sexual fitness, significant improvements were noted in male sexual function after 21 subjects, ages 40-77, with mild to moderate erectile dysfunction, completed a 4 week regimen of ArginMax. 88.9% of the subjects experienced improvement in ability to maintain an erection during intercourse. 75.0% of the subjects experienced improvement in satisfaction with their overall sex life. There were no significant reports of side effects (headaches, nausea, stomach upset, chest pain, dizziness, vision disturbance, changes in BP). Based on the findings of this study, there appears to be strong indication that natural dietary supplementation (ArginMax) may play an important role in sexual health and erectile function.

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WHEN SMOKERS QUIT

Within 20 minutes of smoking that last cigarette, the body begins a series of changes that continues for years.

20 MINUTES

- Blood pressure drops to normal
- Pulse rate drops to normal
- Body temperature of hands and feet increases to normal

8 HOURS

- Carbon monoxide level in blood drops to normal
- Oxygen level in blood increases to normal

24 HOURS

- Chance of heart attack decreases

48 HOURS

- Nerve endings start regrowing
- Ability to smell and taste is enhanced

2 WEEKS to 3 MONTHS

- Circulation improves
- Walking becomes easier
- Lung function increases up to 30 percent

1 to 9 MONTHS

- Coughing, sinus congestion, fatigue, shortness of breath decrease
- Cilia regrow in lungs, increasing ability to handle mucus, clean the lungs, reduce infection
- Body's overall energy increases

1 YEAR

- Excess risk of coronary heart disease is half that of a smoker

5 YEARS

- Lung cancer death rate for average former smoker (one pack a day) decreases by almost half
- Stroke risk is reduced to that of a nonsmoker 5-15 years after quitting
- Risk of cancer of the mouth, throat and esophagus is half that of a smoker's

10 YEARS

- Lung cancer death rate similar to that of nonsmokers
- Precancerous cells are replaced
- Risk of cancer of the mouth, throat, esophagus, bladder, kidney and pancreas decreases

15 YEARS

- Risk of coronary heart disease is that of a non-smoker



Source: American Cancer Society; Centers for Disease Control and Prevention

It's All in the Genes

What You Should Know About the Future of Health Care

A drop of your blood contains the blueprint, or genetic code, for your entire body. Our genes will soon become like a reference book to our bodies, revealing good news (you don't have the gene which makes you "susceptible" to breast cancer) or bad news (you are predisposed to heart disease).

In the near future, when you visit your doctor for a routine physical, he may take a drop of your blood, have it analyzed by a DNA decoder and produce a complete genetic profile for you. The estimated 80,000 genes on the 46 chromosomes of the human cell are being sequenced by the Human Genome Project, which has a projected completion date of 2001. Researchers have so far identified approximately 770 genes that cause specific human diseases, with the number going up on a weekly basis.

But what good is it to know the bad news about your genes—something you are born with? Physicians hope to replace defective genes with good ones or to treat people with drugs that turn bad genes off. Bad genes can directly cause diseases, such as in cystic fibrosis. Other genes cause "susceptibility," or a predisposition to disease if the person is exposed to specific environmental toxins or other factors caus-

ing those genes to malfunction.

The genetic code, or language, is beginning to make sense, giving rise to the field of gene therapy. Promising research indicates that the future of health care may be in the genes. For example, experimental gene therapy is being conducted for many cancers. These include cancers of the lung, brain, central nervous system, colon, liver, ovaries and pancreas. Scientists are making gains in gene therapy for other diseases such as heart disease, cystic fibrosis, high blood pressure, Alzheimer's disease, musculoskeletal diseases and arthritis. Gene therapy also has the potential to permanently cure selected genetic diseases.

A major obstacle in gene therapy is the effective delivery of normal genes to specific targets (like cancer cells) and have the genes continuously operate at levels that will help a patient. Many gene therapy experiments use modified viruses as "vectors" that shuttle gene coding into cells like microscopic delivery trucks. Viruses have specialized mechanisms which allow them to bind to specific types of cells and deliver their gene cargo inside the cell. The cells should then "express," or manufacture, the needed proteins (which correctly carry out necessary functions of the cell) specified by the introduced gene. In the case of viral vectors, bits of virus DNA are removed to cripple the virus, so it can infect cells but not reproduce.

Non-viral vectors are also being used to deliver corrective genes to cells. The use of minute, hollow orbs called lipoplexes are being studied. Composed of a lipid (fatty) membrane on the outside and a watery solution on the inside, lipoplexes can be created with

DNA cargo. Lipoplexes are absorbed by cells and disperse their DNA after entering the cell membrane. The DNA then enters the nucleus of the cell.

Currently, many gene therapy experiments are taking an approach focused on using "suicide" genes to alter specific cells—such as cancer or HIV-infected cells—to produce proteins which make them vulnerable to attack by drugs or by the body's immune system.

Gene therapy may also be able to prevent inherited diseases at the very beginnings of life. If separated at a very early stage, embryonic cells have the ability to regenerate whole embryos (that's how identical twins arise). By artificially separating the embryonic cells, gene therapy can alter the DNA of one—say to correct sickle cell anemia—and return it to the mother for gestation. The embryo becomes a healthier clone of itself.

The anatomical view of the human body has given way to the genetic view. Once completed, the Human Genome Project will be for the practice of medicine what reaching the moon was to space exploration. With it, the diagnosis and treatment of human diseases may be far more successful than anyone could have imagined even a decade ago. The promises of genetic medicine now seem attainable. The future of health care is in the genes.

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Diagnosis and Management of Female Urinary Incontinence

Kevin C. Shandera MD*

Urinary incontinence is a prevalent condition affecting an estimated 13 million Americans of which 85% are women. The types of incontinence as well as their diagnosis and management are presented herein.

Introduction

Urinary incontinence (UI) is defined as the involuntary loss of urine. Incontinence is a symptom not a disease and is quite common. The agency for Health Care Policy and Research reported that approximately 13 million Americans have UI of which 85% are women.¹ The incidence of UI increases with age; however it is not limited to the elderly. Ten to twenty five percent of women between age 15 and 64 have UI.¹ The societal cost of incontinence in the United States in 1995 has been estimated to be over 26 billion dollars for only those patients 65 years and older.² Incontinence produces emotional and physical discomfort, often causing individuals to limit their activities for fear of ridicule or potential loss of self-esteem and resulting in depression. Despite this, it has been estimated that only 10% people with incontinence seek medical help for their incontinence. Recently, there has been a number of advances in the diagnosis and management of UI. Health care providers should be aware of these advances and take an active role in the diagnosis and management of UI with a goal of decreasing the impact of this symptom upon our society.

Types of Incontinence

There are several types of incontinence which fall into two basic functional defects. Either the bladder fails to properly store urine or the urethra fails to act as an effective sphincter. Bladder causes of UI include: urge incontinence and overflow incontinence. Urethral causes include: stress urinary incontinence and intrinsic sphincter deficiency.

Urge incontinence occurs when the bladder contracts without permission either with or without warning. Commonly this is manifested by a person who gets the urge to void but leaks prior to

reaching the toilet. When urge incontinence is secondary to a neurological lesion, such as cerebrovascular accident, Alzheimer's disease, or multiple sclerosis, it is known as detrusor hyperreflexia. Urge incontinence from a non-neurological etiology is known as detrusor instability.

Overflow incontinence occurs when a full bladder overcomes the resistance of the urinary sphincter and overflows. This form of UI is associated with diabetes mellitus or pelvic trauma that disrupts the normal sensation of the bladder. Consequently, the patient is unaware that his or her bladder is full.

Stress urinary incontinence (SUI) occurs when urethral hypermobility causes leakage in response to increases in intra-abdominal pressure (stress). It is associated with exercise, sneezing, coughing, lifting or Valsalva. When the urethra is hypermobile, a pressure differential between the bladder and urethra occurs with increases in intra-abdominal pressure (stress). This pressure differential overcomes the urethral resistance, producing incontinence.

Intrinsic sphincter deficiency (ISD) is similar to SUI but leakage occurs with a minimal increase in intra-abdominal pressure and the urethra is often well supported. ISD should be suspected in patients who have persistent incontinence following an incontinence procedure.

History

The history should assess the risk factors associated with incontinence in an attempt to differentiate which type of incontinence exists. Pertinent questions include:

- frequency, duration, and timing of UI?
- when do you leak (cough, straining, on the way to the toilet)?
- neurologic problem?
- number and type of pads used per day?
- menopause/hormonal replacement?
- history of previous pelvic, vaginal, or incontinence surgeries?
- constipation and/or encopresis?
- frequent urinary tract infections (UTI)?
- is this condition lifestyle limiting?
- number of pregnancies, deliveries, vaginal vs. c-section?

Urge incontinence is usually preceded by a strong desire to void. Patients often will complain of having "accidents" on the way to the toilet. Overflow incontinence typically causes frequent or constant dribbling as additional urine enters the full bladder. Whereas SUI and ISD both present as UI with exertion (increased intra-abdominal pressure) but differ in that ISD is associated with minimal exertion.

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Fig 1.—Urethral hypermobility. The arrow indicates direction of pressure from an activity such as coughing, causing the bladder neck and urethra to open briefly. Reference 3.

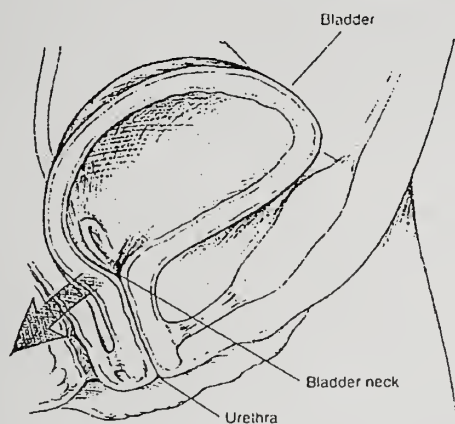
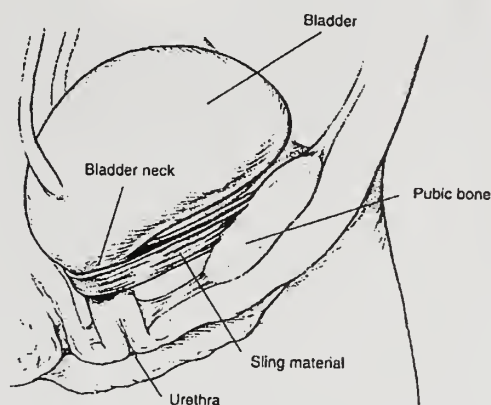


Fig 2.—Sling in place, secured to the pubic bone. Reference 3.



Physical Examination

A thorough physical examination (PE) of the vagina and the rectum is performed to rule out atrophic vaginitis and/or neurological deficit. The anterior vagina is visualized as the patient Valsalvas with a full bladder to determine the presence of and grade of a cystocele. A digital rectal examination is performed to determine the strength of the anal sphincter and the support of the posterior vagina. A rectocele is herniation of the anterior rectum into the vagina on Valsalva secondary to decreased posterior vaginal support. The urethra should be evaluated for hypermobility (Figure 1). A simple method involves placing a lubricated cotton tipped applicator in the urethra and have the patient Valsalva. The applicator should initially be horizontal (supine patient), with Valsalva the applicator should rotate less than 15°. A rotation greater than 15° is consistent with urethral hypermobility.

It is important to reproduce the incontinence. First, the urologist or urogynecologist will catheterize the bladder to determine the volume of the post-void residual urine. A post-void of greater than 50cc is abnormal. Once catheterized, the bladder is filled and patient is asked to cough and/or Valsalva. Does the patient leak? Often a pressure measuring catheter is used to measure the pressure necessary to produce UI. This is known as a cystometrogram or urodynamics. Finally urodynamics are used to determine the compliance of the bladder. The non-compliant bladder often presents with symptoms of urge incontinence. A urinalysis should be performed to rule out a urinary tract infection and glucosuria.

The questions to answer on PE are:

- Is the urethra mobile?
- Does the patient have UI with Valsalva or cough?
- Does the patient have other vaginal problems (cystocele, enterocele, rectocele, atrophic vaginitis)?

Questions to be answered on Urodynamics include:

- Is the bladder compliant?
- At what pressure does the patient leak (Valsalva leak point pressure)?

Of note, a normal urethra will not leak at any pressure.

Treatment Options

The vast majority of patients with UI can be cured or improved. The history and PE with urodynamics will allow the clinician to determine if the UI is secondary to a bladder problem or a urethral problem, or combination. Bladder problems are generally treated medically, whereas urethral problems are generally treated surgically.

Bladder problems produce urge incontinence. Diet modification, decreasing the consumption of bladder irritants such as caffeine carbonated beverages, spicy foods and artificial sweeteners, are often helpful. Medications, namely anticholinergics such as oxybutynin chloride (Ditropan), hyoscyamin, and Tolteradine, are quite effective at delaying or preventing premature bladder contractions. Behavior modification, such as bladder retraining or timed voiding, increases the time intervals between voids, and is often helpful.

Urethral problems are treated primarily with surgery if conservative measures such as Kegel exercise and estrogen replacement have

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Table 1.—Types of Urinary Incontinence

Type	Pathophysiology	Signs and Symptoms
Urge Incontinence	■ Involuntary bladder contractions	■ Leaks on way to toilet.
Overflow Incontinence	■ Bladder overdistention and leakage because of impaired sensory feedback from the bladder.	■ Poor urinary stream ■ Constant dribbling ■ No sensation of fullness
Stress Urinary Incontinence(SUI)	■ Bladder neck/urethral hypermobility	■ Incontinence with cough, sneeze, or Valsalva
Intrinsic Sphincter Deficiency (ISD)	■ Urinary sphincter failure	■ Marked incontinence with standing, cough, sneezing, Valsalva

failed. Kegel exercises are designed to strengthen the muscular support of the bladder, vagina, and rectum. There are three main categories of surgeries used to treat SUI: retropubic suspensions (Marshall-Marchetti-Krantz, Burch culposuspension), transvaginal suspensions (Raz, Stamey, Pereyra), and sling procedures. The goal of each is correct urethral hypermobility. The most durable of these procedures is the pubovaginal sling (PVS) procedure. The PVS uses a thin strip of autologous (rectus fascia or fascia lata) or cadaveric fascia to create a hammock-like bolstering of the urethra (see Figure 2). The long-term cure rate of PVS is about 83%.

Patients with ISD refractory to Kegels and estrogen replacement require either PVS or transurethral submucosal collagen injection to coapt the open urethra. Estrogen replacement increases the vascularity of the vaginal mucosa and urethra thereby increasing the coaptability of the urethra. Collagen injection is usually performed as an office based procedure under local anesthetic via a urethroscope. The collagen is injected under the urethral mucosa at the proximal urethra in an attempt to coapt the urethra.

Summary

Urinary incontinence affects an estimated 13 million Americans of which 85% are women. It is an embarrassing and lifestyle limiting condition for which effective treatment is available. Health care providers should be alert to the signs and symptoms of UI and pursue its etiology. Those patients who fail medical therapy, in whom the etiology for the incontinence is unclear, or those patients with concomitant cystocele, enterocele, or rectocele, should be referred to an incontinence specialist.

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Life in These Parts

Mel Kaneshiro's 61st birthday Bash
(Kanreki Iwai) (Excerpts from MCTad Iwanuma's humorous script)

"Mel—Up here I feel like Elizabeth Taylor's new husband on their wedding night. I know what I'm supposed to do, but how am I going to make it new and interesting. So, who else is better and more insightful to start with but his wife, Pat. So I asked her, 'What's good that I can say about Mel?' Her answer.—'Nothing.' 'But wait! there is one good thing I can say about him, he has learned well and says over and over'—'Pat, God heals, but I collect the fees.'

I respect Mel so much. He is a great doctor, a great diagnostician. Just the other day, in fact, I remember telling him about this puzzling case I had. The patient came to see me because the day before while sitting on the bench at Ala Moana Shopping Center, his neck kept getting stiff each time a woman walked by. I was puzzled about the diagnosis and mentioned it to him. 'Eh!', he said, 'try ask him if he could have swallowed his Viagra too slowly that morning.' 'Doctors today,' he said, 'Our job is getting so hard; not only do we have to heal the sick, but we have to raise the dead.'

We all know Mel to be diplomatic, and short; you know short statured and composed, but short. I always have to try not to talk down to him. Did he tell you about the time he was in school at Tulane and traveled by train to Pennsylvania? The tall lady selling tickets had, how shall I put it discreetly, an amazing hour glass figure. Mel walked up to the counter, eyes wide open, took a deep breath and said, 'Aah,' 'Pickets to Titsburg Please.' He didn't even notice her smile.

Mel came to be a 'big deal'—Chief of Staff, VP of Medical Affairs, HAPI Board, and Medical School faculty. He's like a chicken doctor, 'He's everywhere, he's everywhere.'

You all don't know this, but when Mel was younger, he was, what shall I say—youthful, and a drinker. He wanted to donate his organs so he figured he would try to pickle them. There was the time we were at a benefit with Eugene Matsuyama, and Mel was having a few. To our consternation, he kept eyeing this ravishing creature all dressed up in crimson red. He kept drinking more and more and finally said, 'I'm going to dance.' He got up from his chair. Mats and I looked at each other; I grabbed him and Mats whispered, 'Eh Mel, wait, wait—that's the Archbishop Cardinal of Honolulu.'

Did you see the size of Mel's office, 802.5 SC Kuakini Medical Plaza? SC stands for 'Storage Closet.' The 802.5—half an SC. I went to see him as a patient...for real. It's the only exam room I've been in where in order to lie down you have to stand up.

There was the time when Mel was Chief of Staff and JCANO came to survey Kuakini. JCANO is the national accrediting body that rates us every 3 years and very stressful times for all of us. One year we received several unfounded criticisms and Mel was responsible for compos-

ing a reply. This is what he wrote: 'Dear JCANO, I am sitting on a oval seat in the smallest room of my home which also has a tile floor and a bathtub and deodorant. I have your review before me. Soon it will be behind me.'

Mel's allegory: We have been doing all this work for managed care. Endless meetings, many with HMSA. Mel says HMSA is the hungry lion. The doctors are the gullible missionary. The lion has somehow trapped the missionary and is ready to pounce. Auwe, the missionary sinks to his knees and starts to pray. To his amazement the lion also sinks to his knees and starts to pray. 'It's a miracle, the savage beast joins me in holy prayer.' 'Quiet,' the lion says, 'I am saying grace.'

I advised Mel not to get too involved with Managed Care for when he gets to the Pearly Gates he's going to hear 'This physician is authorized only a 3 day stay with us.' 'No worry!', he tells me, 'I'm set. I've got the guarantee to get in—My United Way Card.' "

*Our party boy his name is Mel
And we all know he's really swell.
We came here to celebrate,
Before he reaches the PEARLY Gate.*

*He has two kids and a wife named Pat,
No dog, no pony, no pussy cat.
He rules his house with an iron hand,
As long as Pat says he can.*

*He's a VP of our Medical Staff,
To lead us fore, we hope not aft.
So Mel, listen to this good advise
We don't want to say it twice.*

*On this evening of your KANREKI
This is how your estate should be.
Forget—KODOMO NO TAME NI
Leave all your money to Kuakini.*

Estate Planning Rap (Modified) with apologies

Thyroid Cancer Rate

Hawaii has the highest thyroid cancer rate in the nation which may be related to our high volcanic activity. Our thyroid cancer rate is on par with New Zealand and Iceland which also have volcanic activity. Queen's *Marc Coel* suggests that patients have their thyroid glands checked because thyroid cancer is highly curable.

Giving the Gift of a Lifetime

Eighty seven year old *Walter Chotzen*, retired business man, poet, writer of short stories and gentle soul released his dying body to the "Willed Body Program" of the UH Medical School. Advertiser medical writer Beverly Creamer describes Walter's poignant meeting with the young medical students. His son Daniel read aloud one of his father's poems.

"Mourn me not, my children...
The flesh has returned to my

beloved earth whence it came...
All existence is flow and I am
of the river.
As you are touched by the
winds of Life, rejoice...
I am caressing you."

This Mysterious Universe

A 67-year-old Asian male developed a severe Rt subacromial bursitis overnight. He found a chiropractor in the yellow pages who had him stand in front and threw imaginary bolts of energy with hand gestures at the affected joint. When the patient questioned the beguiling therapy, the "doctor" explained that there was energy imbalance and that he was restoring the energy balance with bolts of energy. The bewildered patient decided against the 12 treatment program at \$30 per visit and opted for a single physician administered Xylocaine-cortisone shot.

Making Miracles, Changing Lives

By Don Chapman, MidWeek, July 19, 1998 (Excerpts therefrom)

Transplant surgeon *Linda Wong* remembers the moment she knew she wanted to do transplants. "It hit home at the end of my fellowship in San Francisco. There was this young girl, and when they brought her in she was in a coma. She was on a respirator, and had all these tubes and catheters in her. She was totally unresponsive. She was bleeding; all sorts of bad things were happening. Meanwhile, the transplant team found a matching donor in New Mexico, so they sent me on a jet to Albuquerque. It was a couple of hours down, then do the operation to remove the donor liver, a couple of hours back. And then I helped the team put this liver in for four or five hours, took her to the recovery room, and to the intensive care unit. I was totally exhausted; it had been 18 hours of running around and surgery. Then I went home and slept for four hours. When I came back, she was up and watching the Flintstones on TV and all the tubes were out. I mean, this is a girl who was going to die in a day and she was up and smiling. It was exciting. Liver patients are on the brink of death, and you bring them back. I remember thinking it was just the wildest thing." (Linda's dad is transplant surgeon, Livingston Wong and mom is internist Rose Wong).

Physician Moves

July: *Richard Sakimoto* retired after practicing OB-GYN for 60 years.

August: *Charles Ushijima* announced the opening of his new practice in OB-GYN at Queens, POB I.

September: KMC Director of Laboratories, pathologist *Frank Fukunaga* who started at Kuakini in 1964 retired. *Kent K. Kumashiro*, specializing in pediatrics joined Hilo Medical Associates at 73 Pu'uhonu Place, Hilo

Letters to the Editor

"HMSA's plan to grade doctors and then financially reward them is both misguided and arrogant.

HMSA is attempting to skew doctors' behavior more to HMSA's liking without utilizing physician input or guidance. If HMSA thinks it knows more about what constitutes excellent medical care than do doctors, why doesn't it hang out its own shingle and let people come to them when they are sick?

If HMSA has all this extra cash lying around, why not reward its consumers with lower premiums rather than using it to bribe doctors for loyalty (Business relationship with HMSA) and obedience (quality of care) as defined by HMSA."

Gene Altman MD, Advertiser, July 24, 1998.

Doctor Digs

"Woodward/White might publish a list that contains the Best Doctors in America, but the list that it produced has nothing to do with the real quality of physicians in Hawaii. A correct and complete poll of the physicians of this state would yield a markedly different list. It is my personal opinion that without a direct polling of every practicing physician in the state of Hawaii, this list should never be published. It is a disservice to every patient and every doctor in this state. Are we to understand that there is not one doctor on a Neighbor Island, other than Dr Evslin, on Kauai, that is worthy of mention? I would strongly advise that the next time Woodward/White comes peddling its wares, tell them we are not interested."

*Stuart L. Rusnak MD,
Honolulu Magazine, June 1998.*

Miscellany

Doctors are running their practices like an assembly line these days. One fella walked into an HMO office and the receptionist asked him what he had.

He said, "Shingles."

She took down his name, address, medical insurance number and told him to have a seat.

Fifteen minutes later a nurse's aid came out and asked him what he had.

He said, "Shingles."

So she took his height, weight, a complete medical history and told him to wait in the examining room. A half-hour later, a nurse came in asked him what he had.

He said, "Shingles."

The nurse took his blood pressure, gave him a

blood test and took an EKG. She told him to undress and wait for the doctor. An hour later, the doctor came in and asked him what he had.

He said, "Shingles."

The doctor said, "Where?"

He said, "Outside in the truck. Where do you want them?"

(Bill Burlingame, America Online: Skinyouluv Aug 7)

Beware

A mother once asked me if her daughter could take B complex vitamins. I told her I thought it would be safe to do so, but asked why she posed the question. Her reply was that she was worried because the child's father was highly allergic to bees.

Robert Smith MD, Stitches Jun '98

Trust Me

My wife was to have elective surgery on her knee. During the pre-op tests, she was asked if she had any preference for the anesthesiologist. She replied, "It really doesn't matter."

On the morning of surgery, as the OR nurse wheeled her into surgery, my wife thought they were alone and said, "You know, I think I made a mistake. During pre-op I mentioned that it didn't matter who put me to sleep. I should have said that I wanted the best."

Immediately, she heard a reassuring voice directly behind her say, "I am the best."

Connon Barclay, Zeeland, Mich

The kindergarten teacher was showing her class an encyclopedia page picturing several national flags. She pointed to the American flag and asked, "What flag is this?"

A little girl called out, "That's the flag of our country."

"Very good," the teacher said. "And what is the name of our country?"

"'Tis of thee," the girl said confidently.

You Said It

Working as a rural surgeon, I saw a 25-year-old woman who presented with a graphic description of her problem with hemorrhoids. She told me her whole life story and that her hemorrhoids were a constant "pain in the ass." After examining her, I agreed with the magnitude of her problem and

advised surgery.

She was slated for hemorrhoidectomy under spinal, but all through the procedure she continued her discourse on how hemorrhoids had ruled her life. She often refused her husband intercourse because it "upset my hemorrhoids." The anesthetist tried to quiet her with a sedative, but she refused. Finally the procedure was completed and I announced "There you are Pat, we're all done."

Pat suddenly went silent and then asked, "Am I a perfect ass hole now, Doc?"

Without hesitation, I replied, "Yes, ma'am."

Dr S.M. Amin Flin Flon, Man.

Potpourri

(More condensed medical anecdotes from *Stitches*, the Journal of Medical humor)

Foreign Body

Dublin medical students in the 60's led sheltered lives. Contraception wasn't only unavailable, but illegal. There was no information on other matters sexual. Any book that had the word "sex" in its title was automatically prescribed and that included medical books that dealt with normal sex. As for aberrant sex, the "filthy perversions" of many a clerical diatribe, well, our uninformed imaginations boggled. And this applied to our efforts to interpret case histories as described in textbooks.

Take for example, that grand old fountain of surgical wisdom, Bailey and Love's Textbook of Surgery. In the last weeks before finals, my roommate and I, two innocent young Irish women, soon to be fully qualified physicians, were buffing up our knowledge of surgical problems of the rectum as described by Bailey and Love.

There was suddenly a horrified squeak as my friend got to the section about rectal foreign bodies. Eyes bulging, she read aloud the paragraphs describing how, using obstetrical forceps, a turnip was extracted from the rectum of a gentleman who'd presented with constipation.

"Wan't that a terrible thing!" She was clearly appalled.

"Dreadful!" I agreed, brooding on the logistics of this situation. "How do you think a turnip would get into anyone's rectum?"

She thought for a moment.

"Well, now," she pronounced, "He can't have swallowed it, so he must have sat on it!"

Dr Patricia Mark, Nanoose Bay, B.C.

(Condensed versions of medical humor from *Stitches*, September '98)

Overkill

A pleasant, well dressed woman came in for her annual physical examination. She'd recently experienced some vaginal irritation which she attributed to a mild infection. When asked if she'd used anything to treat the problem, she admitted she had: "Pinesol." I couldn't quite hide my surprise and she became a bit defensive, telling me that after all, "It is a disinfectant!"

"Yes," I replied, "but for floors!"

We obtained vaginal cultures and when the culture report came back, it read, "Organisms resembling vaginal flora."

The poor things—they were mere shadows of their former selves.

Dr Linda Lambert, Calgary

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Cranial Emissions

The elderly woman stared at the psychiatrist and me (a psychologist) disdainfully. Her family doctor had sent her to us for evaluating Alzheimer's. She had a history of hypertension so we felt it might be a vascular problem and the studies supported multi-infarct dementia.

We were meeting with the patient to give her our impression. Unfortunately her family members were invited, but she had come alone. The psychiatrist presented the information logically and clearly, but we had a sneaky suspicion that the vocabulary was over the head of the patient.

I accompanied her back to the waiting room, and I asked for her impression of the meeting.

"I don't think that doctor knows what he's talking about!"

"It's ridiculous," she continued. "The very idea of saying I have a fart on my brain!"

Dorothy Cotton, Kingston, Ont.

Conference Notes

"New Strategies for Achieving Metabolic Control in Type 2 Diabetes" (Extracted from a July 28, 1998 lecture by Michael Bornemann MD, FACP and Scott Hashimoto Pharm D)

Classification DM

- Type I
- Type II
- Secondary Diabetes
- "Type 1.5"
 - MODY (Maturity Onset DM in youth)
 - LADA (Latent autoimmune DM in adults)
 - STERNE: obese teenagers, acanthosis
 - MIN (mixed IDDM, NIDDM)
 - SPIDDM (Slowly progressive IDDM)

Type II

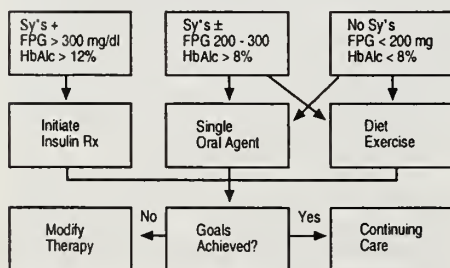
Hyperglycemic 4-7 years prior to Dx; may already have complications when dxed

Type I
Seldom have complications at presentation; start screening 5 years after presentation

Helpful tests

Islet cell antibodies, glutamic decarboxylase antibodies, C-Peptide.

Algorithm for Treatment Type II



Therapeutic Agents

- Oral Agents: (Consider obesity, lipids, renal/hepatic diseases, symptoms)

**Low blood sugar

- Metformin
- Troglitazone
- Prandin
- Acarbose

**High blood sugar

- Sulfonylureas plus above (&/or insulin)

• Insulin

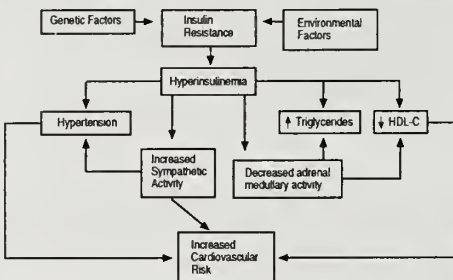
***Therapeutic Options

- BIDS regimen (Bedtime Insulin, Daytime sulfonylurea)
- BIDS Variations

Other oral agents (Troglitazone, metformin, prandin, acarbose) 70/30 insulin at dinner for obese pts

- Insulin only
 - NPH qd or bid
 - 70/30 bid
 - NPH (Humalog bid)
 - Ultralente/Humalog

• Insulin and Atherogenicity



• Alternative to increasing insulin:

- * Add metformin, sulfonylureas, discontinue insulin (Success: insulin usage < 0.8 U/kg, BMI < 34, short duration of insulin usage)
- * Troglitazone

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Volume 57, 1998

Compiled by Marlene M. Ah Heong and Carolyn S.H. Ching of the Hawaii Medical Library

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I got in at two with a ten, and woke up at ten with a two.

The study on drug use done at UCLA School of Medicine reported in *JAMA* reveals that molecular abnormalities in the respiratory tracts of heavy smokers of marijuana and crack cocaine suggest these druggies are at increased risk of developing lung cancer. While there are still some crackheads and pot puffers who seem to think that cocaine and marijuana are not as dangerous to human tissue as tobacco, this study shows that similar molecular events are set in motion leading to lung cancer. Moreover, the study reveals that smoking more than one substance causes more potentially cancerous molecular changes than smoking tobacco alone. California voters passed a law two years ago to legalize medical marijuana, and evidence now shows that marijuana smoking is increasing among teenagers and even children as young as nine years old. The thought has been offered that the heavy campaign to curb teenagers tobacco smoking, may be having the effect of increasing use of marijuana.

Those who don't study the past will repeat its errors. Those who do study it, will find other ways to go wrong.

The American Society of Cataract and Refractive Surgery (ASCRS) conducted a retrospective anonymous survey of 4400 members regarding the incidence of infection with cataract surgery. 1284 surveys were returned revealing that one surgeon in seven (14%) had an infected patient in 1997. No statistical difference was found among corneal, limbal or scleral-corneal incisions. Incision length had no bearing, nor did intraoperative aseptic prophylaxis, draping of lids and lash margins, nor the use of povidone-iodine directly in the prep. Almost all, 96.5%, use topical antibiotics at some time during the perioperative period. The only factor which was statistically beneficial in decreasing incidence of infection was the placement of antibiotics in the infusion bottle or beneath the conjunctiva.

Medicare and Medicaid are the greatest measures yet devised to make the world safe for clerks.

Those ever-creative schemers in the HCFA bureaucracy want to establish a *Medicare + Choice* or Part C. The expectation is that Medicare beneficiaries are supposed to be able to choose from a variety of alternatives to traditional fee-for-service. So far, only one Medicare provider-sponsored organization (PSO) is likely to be in operation by January 1st, but others may come on later in the year. Two applications for new preferred provider organizations have been received but none for medical savings accounts, the plan which could have great appeal if properly marketed. Of course, MSAs don't offer insurance carriers the income generated by other plans. Managed care is a growing part of Medicare, but despite HCFA hoopla, enrollees in managed care plans still make up only 17% of the Medicare population.

Intelligence tests are biased toward the literate.

A woman who was eight months pregnant visited a medical center ER complaining of a sore throat. The physician performed a blood test and throat culture which revealed *Hemophilus influenzae* as a source of her infection. He prescribed a fluoroquinolone antibiotic after consulting the Physicians Desk Reference (PDR), which noted a warning against using the drug for children or pregnant women. That evening the patient noted some shortness of breath and dizziness, and the following day a routine OB checkup revealed that the fetus was dead. The patient sued claiming that the drug led to an allergic reaction that caused the death of the fetus. The trial judge refused the patient's request that the jury be instructed that the warning in the PDR be accepted as the standard of care. PDR entries are written to comply with FDA requirements, to provide useful information and to limit the manufacturer's liability. The court ruled that failure to adhere to PDR warnings, by itself, does not constitute negligence.

Everything is still the same. It's just a little different now.

Louis Harris and Associates recently surveyed the public in regard to occupations and how they are held in public regard. Doctors are at the top of the list at 61% (up from 52% in 1997) of 17 occupations. This is the highest

score doctors have achieved since 1977. Pollsters believe that the numbers reflect a growing recognition that doctors are the primary advocates for patients in disputes with health plans. For two years in a row doctors have beat out scientists for number one. Teachers, the clergy and police officers make up the rest of the top five, while at the bottom in public esteem are journalists, union leaders, accountants, bankers and businessmen. No mention was made of lawyers, but then the list only went down to number 17.

If you think the problem is bad now, just wait until they solve it.

Today's doctor of medicine must get the undergraduate degree, struggle through four years of medical school, devote three or four more years to specialty training, and then get challenged by a patient who has made his own diagnosis off a web page. In some parts of the country, fully one-third of Americans get their health information on-line. Moreover, the patient may arrive with a copy of a piece downloaded from an organic food magazine, and ask you to discuss it. Whether the article is useful or not, the confrontation demands an extended conversation. And now, it's the retirement population that is computer surfing. When their semi-monthly dose of *Viagra* has worn off, they sit down at the computer, and these are the people with diabetes, cancer, high blood pressure, glaucoma, urinary retention, arthritis, emphysema, alopecia, gout, ad nauseum. Remember those pre-computer times when B. Gates was merely a German greeting?

If a light sleeper sleeps with the light on, does a hard sleeper sleep with....the window open?

Just a few months ago Pfizer executives were celebrating in conference rooms as their impotence drug *Viagra* was rolling at 300,000 prescriptions a week, a figure unheard of for a new drug, thanks in part to the media coverage. Sales in the second quarter were \$411 million, but in the third quarter dropped off to \$115 million, far below projections. "We all miscalculated the demand." So, what happened? Analysts stated that worries over adverse reactions, including death, slowed things down. "My wife worries more than it worries me." The FDA has received over 100 reports of severe adverse reactions, such as heart attacks, strokes or death while taking *Viagra*. Still, it is impossible to know how many events are actually related to the drug. Also there is the limited action, or as one man said, "It's a Disney ride with an hour of waiting for a 2 minute ride." Also, the related impotence problems of relationships, depression, and other health factors, do not disappear, as some expected. Of course, there is no reason for Pfizer to be disappointed since the current use is at 170,000 prescriptions each week, and the drug will be around indefinitely.

If you're already in a hole, there's no reason to continue digging.

The Health Care Financing Administration's bundled fee for the facility and the corneal tissue for penetrating keratoplasty performed in ambulatory surgery facilities goes far beyond a cut. The proposed reimbursement bundle of \$1648 for the two components would bring PKP surgeries to a halt in ASCs. The cost of donor tissue alone ranges from \$1400 to \$1800 from the eye bank, and that figure is often subsidized by charitable donations. This would leave the facility fee unmet. The American Academy of Ophthalmology, the American Society of Cataract and Refractive Surgery and Eye Bank Association of America met in mid-September with officials of HHS and HCFA in an attempt to alter the proposal. Medicare reimbursement schedules for ASCs are paid for from Medicare part B, while hospitals are paid by part A where they simply add on charges for goods and services.

Addenda

- ❖ Queen Victoria smoked marijuana to cure her cramps.
 - ❖ I admire our Congress. Everything is in the 70s; the temperature, the ages, the IQs.
 - ❖ Is it illegal to charge admission to a free-for-all?
- Aloha and keep the faith - rts ■



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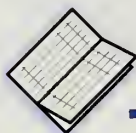


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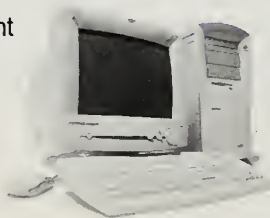


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Pua Naupaka

Depicting the legend of two separated lovers and the curious "half-flower" naupaka blossom found only in Hawaii.



Editorial

Norman Goldstein MD
Editor, Hawaii Medical Journal

Laparoscopy Part II

This Special Issue completes the Textbook on Laparoscopy in Hawaii.

These manuscripts describe the many indications for Laparoscopy in Obstetrics and Gynecology and, at least, will serve as a textbook on the subject. I suggest you find your copy of the November 1998 issue and bind them together at your local print shop for the most up-to-date information on the many uses of laparoscopy.

Thanks again to Henry Yokoyama MD for asking Bradley D. Wong MD to serve as Guest Editor for this textbook.

Brad, really great job getting these authors together for an excellent Special Issue.

We Could Not Do It Without You!

Thanks to the 43 Peer Reviewers who have helped review manuscripts for theHMJ. Hawaii Medical Journal is right up there with the New England Journal of Medicine as one of the only two peer-reviewed Journals in the United States. Mahalo to all who have helped us in 1998. Our reviewers continue to be fair, honest and expeditious in the evaluations of contributed manuscripts.

Those of you who would like to serve in the following specialty areas, please fax or mail your interests to the Editorial Office, attention Drake Chinen (808) 528-2376.

Peer Review, We Need Your Help

As readers of the Journal know, our published manuscripts are peer-reviewed. Our Peer Reviewers are the authorities in many specialties of medicine as well as family and general practice. Our readers also have diverse backgrounds and interests in many fields of medicine. While some of our manuscripts may seem specialized - such as our Special Issues on Ophthalmology, most physicians find some interest in all of our manuscripts. Highly specialized papers are usually not appropriate for our Journal, and are referred to other publications.

Many physicians spend a great deal of time reviewing the manuscripts sent to them by the Journal Editor, and also responding to the reviewers criticisms of their own papers. The Editor and Guest Editors of our Special Issues also spend countless hours, indeed days, fine-tuning the process of manuscript peer review.

As Drummond Rennie MD, Deputy Editor (West) of JAMA noted, peer review educates everyone concerned, and is comforting to editors and to the scientific community, who believe that attempts to make what seems to be an arbitrary process more democratic.¹

In a publication of the Council of Biology Editors, Inc., Peer Review in Scientific Publications,² Rennie further states:

"It is my bias that almost every manuscript that I have handled as an editor has been proved by the scrutiny of reviewers. Some papers have been turned from mediocre to excellent by the extraordinary efforts of dedicated reviewers. At the very least, authors have had the benefit of fresh sets of eyes, and on a few occasions, the reviewers have saved the author from public humiliation. It is also my bias that, though I have witnessed all sorts of misconduct during the review process, from flagrant plagiarism to unconscionable delay, from malicious slander to willful suppression of new ideas, editorial peer review is a process that has been more beneficial than harmful. It is difficult for me to imagine publication without such review, and if orderly review were abolished tomorrow in favor, say, of some enormous electronic bulletin board, I would become disoriented as well as unemployed."²

As Editor of the Journal, I have the same bias. I also have had the opportunity to review dozens of manuscripts submitted for publication, as well as an opportunity to expand my personal reading and knowledge in many fields of medicine - not only in my specialty of dermatology.

My personal mahalo to our peer reviewers. We continue to be fair, honest, and expeditious in our evaluation and publication of our manuscripts.

As the interest in our Journal has increased in the past three or four years, we have received some manuscripts for which we have had no reviewers on our panel. We must expand our Peer Review Panel. If you would like to serve the Journal as a peer reviewer in the following fields, please fax or mail your interest to the Editorial Office fax 808-528-2376.

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Letter to the Editor

John M. Briley, Jr. MD Maui Medical Group

Pertaining to the Harry L. Arnold Jr. Case of the Month: Eosinophilic Meningitis / Angiostrongyliasis From Eating Aquaculture-raised Snails (Hi Med J, Oct.98, pg. 652).

When I first moved here in 1970, I saw in the ER a toddler with no specific symptoms, but "not feeling well" (a slight headache and stiff neck).

His father, at that time a visiting GP, watched over my shoulder as I performed the LP. What at first it looked to be plastic shavings in the CSF in the plastic collecting tube, turned out to be wiggling. He observed, "fascinating." I, on the other hand, almost fainted.

It turned out they were not the larvae of the round worm, but the adult worms, and the first reported. A public health official and I wrote an article which ended up in some obscure biologic journal (the copy of which I have lost). But it was the first reported case of adult worms being in the CSF. The kid did great after the tap, but I credit him for one of my gray hairs.

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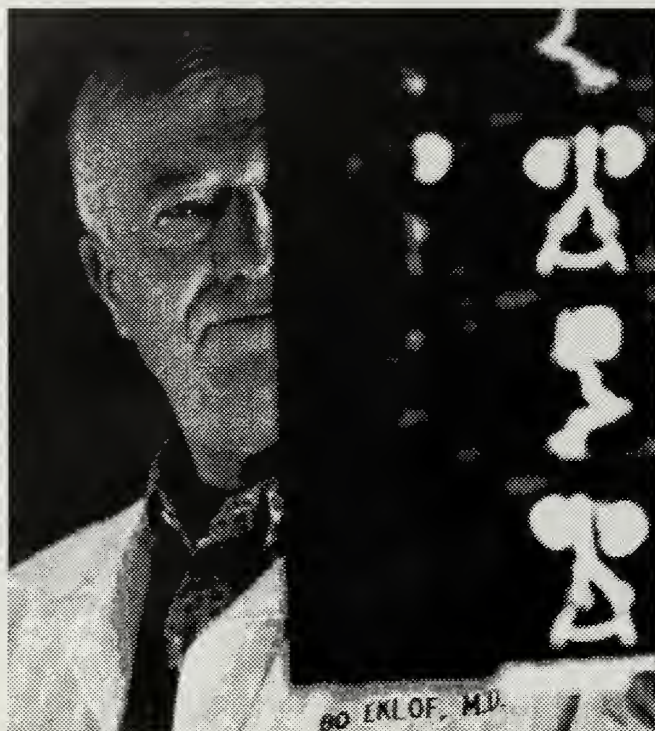
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Peter J. Kudenchuk, MD, FACC, FACP
December 4, 1998, 12:30 – 1:30 p.m.
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Learning Objectives

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- Recognize recent clinical trials that have focused on antiarrhythmic prophylaxis of high risk cardiac patients.
- Evaluate the role of implantable devices in the prevention of sudden cardiac death.

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Hypercoagulable State in Budd-Chiari Syndrome

Dipika Mohanty, MD
December 11, 1998, 12:30 – 1:30 p.m.
Doctors Dining Room

Learning Objectives

At the conclusion, participants should be able to:

- Understand the clinical course of the Budd-Chiari Syndrome.
- Review the management of the Budd-Chiari Syndrome.
- Summarize the clinical characteristics of the case studies.

– Tumor Board Conference –

Thyroid Cancer Incidence

Reuben Guerrero, MD
December 14, 1998, 12:30 – 1:30 p.m.
Doctors Dining Room

Learning Objectives

At the conclusion, participants should be able to:

- Understand the difference in the incidence of thyroid cancer among different ethnic groups.
- Recognize the different type and incidence thereof.
- Describe diagnosis and treatment of thyroid cancer.

– Friday Noon Conference –
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Viscosupplementation in Osteoarthritis

Timothy Olderr, MD
December 18, 1998, 12:30 – 1:30 p.m.
Doctors Dining Room

Learning Objectives

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Laparoscopy in Gynecologic Surgery

Keith Terada MD

Laparoscopy has been utilized in gynecologic surgery for over 20 years. With the introduction of video monitoring and the development of new endoscopic instruments, the role of laparoscopy has greatly expanded. Laparoscopy is an invaluable tool in the management of the cancer patient. Current use focuses primarily on the diagnosis and staging of intraabdominal and pelvic malignancies. However laparoscopy is also utilized as an adjunct to therapeutic resection and palliation. The following is a brief discussion of the role of laparoscopy in the management of gynecologic cancer.

Ovarian Cancer

For cancer of the ovary, laparoscopy is utilized primarily as an adjunct to diagnosis and staging. It presents an alternative to laparotomy in the evaluation of the patient with an adnexal mass; if ovarian cancer is found on laparoscopy, then the surgeon may proceed immediately with laparotomy and therapeutic resection. Alternatively, patients with a benign mass or with unresectable disease can avoid unnecessary laparotomy.

One major concern in the laparoscopic management of the patient with an adnexal mass is the potential rupture of a malignant ovarian cyst. Spillage of malignant cells can seed the peritoneal cavity and theoretically worsen the prognosis. Retrospective studies on this issue, however, remain equivocal. Most studies demonstrate no significant difference in survival when intraoperative rupture occurs, even if patients receive no postoperative treatment.¹⁻³ Other studies, however, demonstrate a negative impact on survival;⁴ therefore the issue remains unresolved. The prudent surgeon should best approach potentially malignant cysts with caution and avoid intraabdominal spillage if possible.

Endometrial Cancer

The primary treatment for early stage adenocarcinoma of the endometrium is hysterectomy and bilateral salpingo-oophorectomy. A significant number of patients with clinical stage I cancer, however, may have extrauterine metastasis. The surgical evaluation for endometrial cancer, therefore, includes peritoneal washings for cytology, selective pelvic and paraaortic lymphadenectomy, and inspection of the peritoneal and serosal surfaces in the abdominal cavity. Although laparotomy has been the traditional approach for accomplishing this, recently developed techniques allow all of this to be performed laparoscopically. Therefore laparoscopic staging, when combined with vaginal hysterectomy and bilateral salpingo-oophorectomy, appears suitable for the treatment of early stage endometrial cancer.

Padial et. al. reported on a series of patients undergoing laparoscopic-assisted vaginal hysterectomy (LAVH) compared to historical controls undergoing abdominal hysterectomy.⁵ Length of surgery and operative blood loss were similar; length of hospital stay, post-operative fever, and patient discomfort were lower with LAVH. Childers⁶ and others^{7,8} have reported on laparoscopic pelvic and paraaortic lymphadenectomy. In Childers series operative time for the paraaortic lymphadenectomy ranged from 20 to 75 minutes, mean number of lymph nodes harvested was 6.3, mean blood loss was 50 cc, and there were no major intraoperative complications. The procedure could not be completed in 3 patients because of obesity.

Therefore LAVH with laparoscopic lymphadenectomy and staging appears a reasonable alternative to laparotomy in patients with early stage endometrial cancer. Potential benefits include shorter hospital stay, less discomfort, and quicker resumption of normal function. Contraindications include patients with extensive intra-abdominal adhesions and obese patients, in whom laparoscopy and/or retroperitoneal dissection may not be feasible. Other relative contraindications include underlying respiratory or cardiovascular illness. Unknown at this time is whether long-term follow-up will yield results similar to laparotomy. Areas of concern include the extent of staging lymphadenectomy, the adequacy of the abdominal exploration, and the possibility of port site metastasis. Although LAVH potentially shortens hospital stay and quickens recovery, overall curability must remain the primary focus and should not be compromised.

Cervix Cancer

It is recognized that in patients with locally advanced cervix cancer, approximately 30% will have extrapelvic metastases. This is of concern, since intraabdominal or retroperitoneal lymph node metastases clearly impact treatment and outcome. Patients with paraaortic lymph node metastases require treatment with extended

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field radiation. Ultrasound, CT scan, and lymphangiogram, however, are all of limited sensitivity in detecting metastases. Therefore pretreatment exploratory laparotomy has been utilized for treatment planning. Retroperitoneal lymphadenectomy, however, can be accomplished utilizing laparoscopic techniques. Advantages include a quicker recovery and shorter time to initiate definitive treatment. There may also be the advantage of less peritoneal adhesions and a lower risk of radiation enteritis. Childers et. al.⁹ reported on 18 patients undergoing laparoscopic staging for cervix cancer; no significant complications were reported. Therefore laparoscopy is a potentially useful tool in the pretreatment staging evaluation of patients with cervix cancer.

Recent reports have also focused on laparoscopy as an adjunct to therapeutic resection for early stage cervix cancer. Hatch et. al. reported on 37 patients who underwent laparoscopic assisted radical vaginal hysterectomy for early stage cervix cancer.¹⁰ Mean operative time was significantly longer, however mean hospital stay was significantly shorter when compared to abdominal radical hysterectomy. The incidence of bladder, ureteral, and bowel injury was significantly higher in the laparoscopic group. Survival data was not reported. This approach to the treatment of stage I cervix cancer should be considered investigational at this time.

In summary, the role of laparoscopy in the evaluation and management of the patient with gynecologic cancer is rapidly evolving. Minimally invasive surgery provides a major advantage for quicker recovery and less disruption in quality of life. Overall curability, however, must remain the primary concern and should not be compromised. Carefully planned prospective studies will be required to examine these various issues.

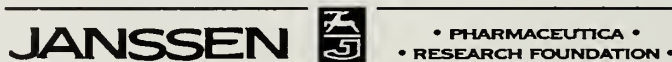
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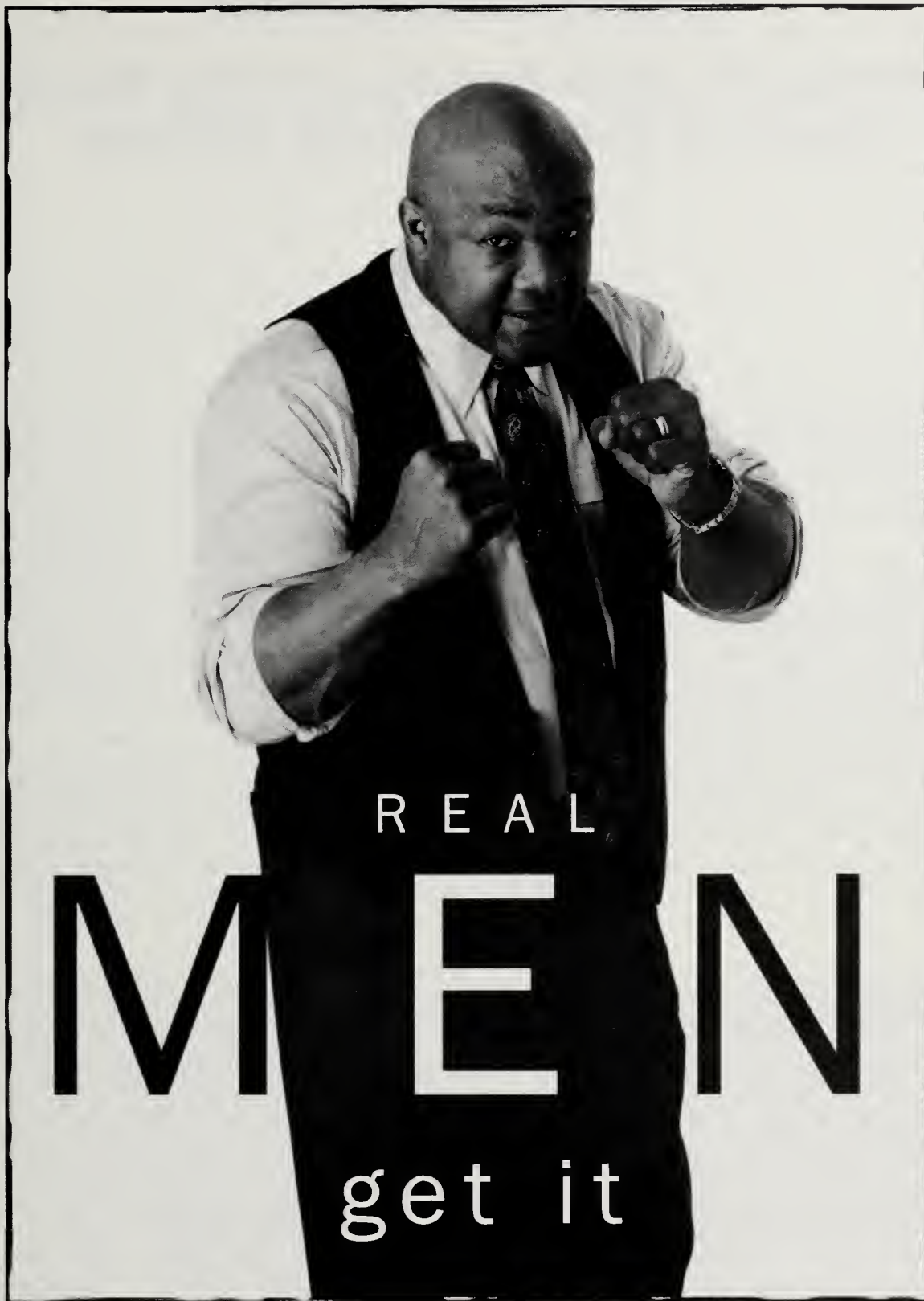
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The Role of Laparoscopy in the Management of the Infertility Patient

Thomas S. Kosasa, MD

Laparoscopy has traditionally been used only as a diagnostic step in the evaluation of the infertility patient. With the advent of more sophisticated instrumentation including the use of laser surgery, laparoscopic procedures can now be performed instead of conventional laparotomy.

Lysis of pelvic adhesions as well as treatment of endometrial implants and endometriomas are now routine laparoscopic procedures with improvement in pregnancy rates comparable to microsurgery. New advances in instrumentation will increase the pregnancy rate following laparoscopic tubal surgery as well as laparoscopic assisted In Vitro Fertilization, and will also increase the safety of this procedure.

Traditionally, laparoscopy has been performed as the final step in the infertility investigation. It was felt that if the history, pelvic examination, and hysterosalpingogram did not suggest the presence of pelvic pathology, the likelihood of an abnormality being found would be small and that controlled ovarian stimulation and timed insemination would result in an acceptable pregnancy rate.¹

Recently it has been shown that the hysterosalpingogram although less invasive cannot adequately assess the pelvis and should

be considered complementary to laparoscopy rather than competitive with it.² Pelvic adhesions are especially difficult to diagnose with the hysterosalpingogram but can be easily seen through the laparoscope. More important, pelvic adhesions can be treated with the use of the laparoscope. The association between pelvic adhesions and reduced pregnancy rates has been well established. Studies have shown that pregnancy rates following lysis of comparable adhesions have resulted in a pregnancy rate of 45% compared to 16% in patients who did not have any corrective surgery.³ Pregnancy rates following laparoscopic lysis of adhesions have shown to be comparable to lysis of adhesions by microsurgery.⁴

Endometriosis has always been a major factor in the etiology of infertility and the incidence has been shown to be as high as 48% in an infertile population. Several modalities have been advocated for the treatment of endometriosis. These have included surgery, medical therapy, or expectant management. Expectant management has been widely used for the patient with minimal endometriosis since it has been shown that an acceptable number of patients with mild disease will conceive without any treatment.

Recently this approach to minimal endometriosis has been reassessed. The Canadian Collaborative Group on Endometriosis published an article in the July 1997 issue of The New England Journal of Medicine.⁵ Results from their work suggested a substantial increase in the pregnancy rates following treatment of mild endometriosis. Patients were treated with either electrocoagulation or laser vaporization of endometrial implants. Studies in the past have shown laparoscopic surgery to be superior to medical treatment or expectant management in terms of pregnancy success, but this was the first study to provide useful figures to corroborate the increased pregnancy rates following laparoscopic treatment of minimal endometriosis.

With moderate or severe endometriosis, there is widespread agreement that surgical treatment is superior to medical therapy since most of these patients have pelvic adhesions. In these patients, elimination of endometriosis as well as restoration of normal pelvic anatomy is the final goal of laparoscopic surgery. The surgical treatment consists of removal of implants by excision, electrocoagulation, or laser vaporization, as well as lysis of adhesions and excision of endometriomas. Although use of the laser is the treatment of choice, many surgeons believe that the success rate is dependent on the completeness of the surgery rather than the specific energy source.⁶

All large endometriomas should be completely excised since aspiration alone results in a recurrence of the endometrioma.⁷ Medical suppression is also inadequate for the same reason since the endometrioma will reform following cessation of medical therapy. Smaller endometriomas can be either excised or thoroughly coagu-

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lated with electrocautery. Laser coagulation does not have the depth to completely destroy the cyst wall of an endometrioma.

Tubal surgery can be accomplished through operative laparoscopy with similar success rates compared to traditional microsurgery. These procedures can be classified into fimbrioplasties, salpingostomies, or salpingo-ovariolytic. A fimbrioplasty or deagglutination of the fimbria is accomplished by inserting a small forcep through the stenotic distal opening of the tube and dilating the jaws to separate the agglutinated fimbria. The pregnancy rates following this procedure have been very acceptable.⁸ Salpingostomy or the opening and eversion of a completely occluded tube is more complex and requires the skill of an experienced laparoscopic surgeon. Recent results have shown that pregnancy rates following laparoscopic surgery for complete distal tubal obstruction have been comparable with pregnancy rates following traditional microsurgery.⁹

Laparoscopic procedures to induce ovulation in patients with the polycystic ovarian syndrome have been introduced as an alternative to ovarian wedge resection. The mechanism for resumption of ovulation following ovarian cortical injury is unknown, but most procedures have shown a reduction of ovarian androgen levels.¹⁰ The most widely used laparoscopic procedure has been to drill holes in the ovarian cortex using the unipolar probe. The success rate appears to be higher with an increase in the destruction of the ovarian cortex. Studies have shown that the ovulation rate was 67% when less than six holes were drilled, and 97% when more than ten holes were drilled.¹¹ Adhesion formation has been reported following the ovarian drilling procedure, so use of a cellulose barrier such as Interceed to cover the ovary has now been a standard part of this procedure.¹²

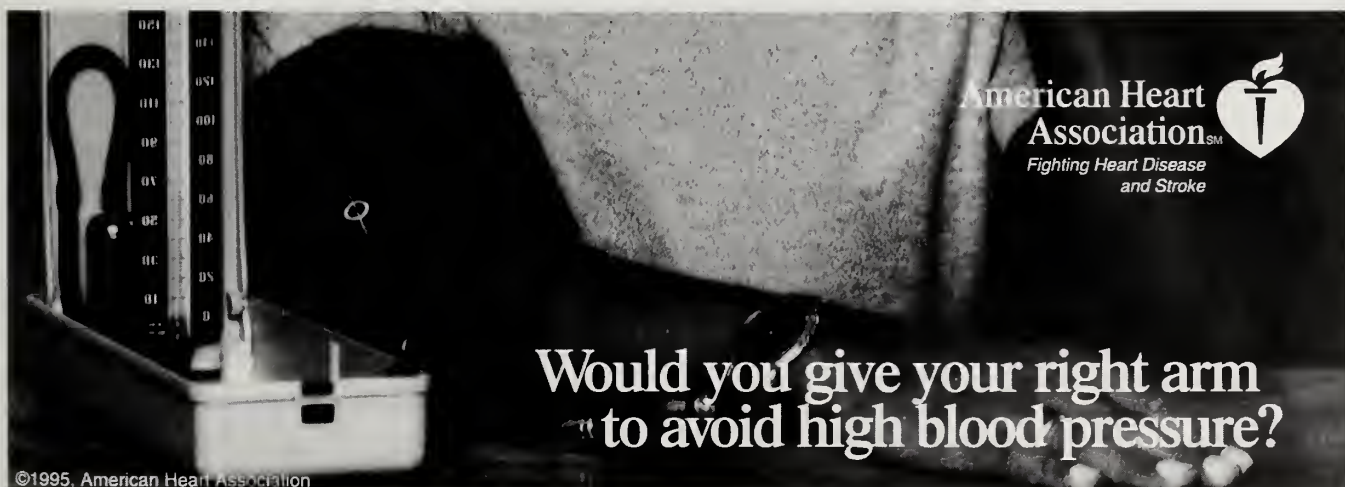
Laparoscopy can also be used in conjunction with certain In Vitro procedures. Although ultrasound guided needle aspiration of the ovary has been the preferred method for obtaining ova, recent evidence suggests that treatment of pelvic infertility factors at laparoscopy such as adhesions and endometriosis may be combined successfully with oocyte retrieval without compromising preg-

nancy rates.¹³ Laparoscopy has also been used in the more traditional role for the replacement of pre-embryos in the zygote intrafallopian tube (ZIFT) procedure or for the replacement of gametes in the gamete intrafallopian tube (GIFT) procedure).

With the advent of new instrumentation the use of the laparoscope in the management of the infertility patient will be expanded especially with the introduction of three dimensional cameras that allow greater depth perception, and through the use of ultrasonic scalpels and coagulators which may eventually replace the use of electrocautery and laser. Continuous evaluation and improvement of laparoscopic procedures and equipment will result not only in an increase in the present pregnancy success rate, but will also increase the safety rate of this procedure.

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Laparoscopic Assisted Vaginal Hysterectomy / Laparoscopic Hysterectomy

Mark T. Wakabayashi, MD

Laparoscopic assisted vaginal hysterectomy has changed the face of gynecologic surgery. Unfortunately it became a "standard" procedure before it could adequately be studied. Therefore most studies are either descriptive or a retrospective comparison to abdominal or vaginal hysterectomy. Laparoscopic assisted vaginal hysterectomy is not a substitute for vaginal hysterectomy. It should be used to convert an abdominal procedure, to one which can be performed vaginally. Laparoscopic assisted vaginal hysterectomy may have a place in gynecologic surgery if selected wisely.

History of Hysterectomy

Today, approximately 600,000 hysterectomies are performed each year in the United States. It is the second most common operation performed, second only to cesarean section. The percentage of women who have had a hysterectomy is approximately 20% by age 40 and 37% by age 65. But the number and rate of hysterectomies have actually declined since the 1970's.¹

It is not known when exactly the first hysterectomy was performed but a reference to hysterectomy was made in the 5th century BC, in the time of Hippocrates. Vaginal hysterectomy was performed many centuries before abdominal hysterectomy was even attempted. Not until the early 19th century were abdominal hysterectomies first performed. Hemorrhage leading to a high mortality rate was a problem in the early years, but better surgical technique, including ligation of the major blood supply to the uterus, made this a more realistic procedure. According to Thomas Cullen, 969 abdominal hysterectomies were done at The Johns Hopkins Hospital between 1889 and 1906 with a mortality rate of 5.9%. The mortality rate for hysterectomy today is .1- .2%.¹

For many years abdominal hysterectomy and vaginal hysterectomy were the only options a woman had. In 1984 the use of a laparoscope in assisting a vaginal hysterectomy was first described. But not until Reich published the article Laparoscopic Hysterectomy,³ in 1989 did this procedure take off. This was also the first time the term Laparoscopic Assisted Vaginal Hysterectomy was used. Since then, thousands of these procedures have been performed. The latest procedures include the Laparoscopic Hysterectomy, Total Laparoscopic Hysterectomy and Laparoscopic Radical Hysterectomy with Pelvic Lymphadenectomy.

Definitions of Laparoscopically Assisted Vaginal Hysterectomy

There has been a lot of confusion on how to define the different procedures. One must remember that the goal of using the laparoscope is to convert what would have been an abdominal hysterectomy to a vaginal hysterectomy. Therefore, in some patients only a diagnostic laparoscopy needs to be performed and if reasonable, the remainder of the procedure done vaginally. In other cases the hysterectomy must be done completely via the laparoscope.

The classification presented is the one used in the Textbook of Laparoscopy edited by Hulka and Reich.²

Laparoscopic Hysterectomy Classification

1. Diagnostic laparoscopy with vaginal hysterectomy
2. Laparoscopic-assisted vaginal hysterectomy (LAVH)
3. Laparoscopic hysterectomy (LH)
4. Total laparoscopic hysterectomy (TLH)
5. Laparoscopic supracervical hysterectomy (LSH)
Including classical interstitial Semm hysterectomy (CISH)
6. Vaginal hysterectomy with laparoscopic vault suspension (LVS)
or Laparoscopic pelvic reconstruction (LPR)
7. Laparoscopic hysterectomy with lymphadenectomy
8. Laparoscopic hysterectomy with lymphadenectomy and omentectomy
9. Laparoscopic radical hysterectomy with lymphadenectomy

The difference among the first four procedures is discussed, since they are the most common.

Number one, the diagnostic laparoscopy with vaginal hysterectomy. In this procedure, the surgeon performs a diagnostic laparoscopy to see if there is any reason to perform an LAVH or TAH, i.e.: extensive endometriosis, pelvic adhesions. If no reason is present, then a vaginal hysterectomy is performed without any laparoscopic assistance.

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Number two, the laparoscopic-assisted vaginal hysterectomy. Of the procedures listed above, this is the one most frequently performed. This term is used when the laparoscopic surgery includes: adhesiolysis; excision of endometriosis; oophorectomy; ligation of the round ligaments, infundibulopelvic ligaments or uteroovarian ligaments.

Number three, the laparoscopic hysterectomy. This term is used when laparoscopic ligation of the uterine arteries is added to the LAVH criteria.

Number four, total laparoscopic hysterectomy. This term is used when ligation of all attachments of the uterus is done laparoscopically including the uteroovarian or infundibulopelvic ligaments, the round ligaments, the uterine arteries and the cardinal uterosacral complex; until the uterus is free of all its attachments. The vagina is then closed with laparoscopically placed sutures.

Indications and Contraindications for Laparoscopically Assisted Vaginal Hysterectomy

Again one must remember that a laparoscopic assisted vaginal hysterectomy should convert a surgery which would have had to have been performed abdominally to one which can be performed vaginally. The goal is not to perform a surgery which can be done vaginally and perform it laparoscopically. Also, the field is changing so rapidly that what used to be an absolute contraindication, such as a malignancy, is now only a relative contraindication to some; and to others an indication.

Indications for Laparoscopically Assisted Vaginal Hysterectomy²

1. Prior pelvic surgery requiring lysis of adhesions
2. Endometriosis requiring treatment or lysis of adhesions or both
3. Pelvic inflammatory disease requiring lysis of adhesions
4. Ligation of infundibulopelvic ligaments for ovarian removal allowing completion by vaginal hysterectomy
5. Presence of pelvic mass
6. Limited uterine mobility
7. Narrow pubic arch
8. Constricted vagina with no prolapse
9. Severe arthritis which prohibits placement of the patient in sufficient lithotomy position for vaginal exposure

Contraindications for Laparoscopically Assisted Vaginal Hysterectomy²

1. Inexperience or inadequate training
2. Pelvic mass that cannot be removed intact through a culdotomy incision or is too large to fit into an impermeable sac
3. Stage III ovarian cancer that requires a large abdominal incision for adequate staging
4. Peripartum indications such as for placenta accreta, uterine atony, unspecified uterine bleeding & uterine rupture
5. Any contraindication to laparoscopy such as severe cardiac disease
6. Any contraindication to surgery itself

Laparoscopic Assisted Vaginal Hysterectomy Versus Abdominal Hysterectomy

Unfortunately, there are no good studies to answer the question, which is better, laparoscopically assisted vaginal hysterectomy or total abdominal hysterectomy. The vast majority of literature is either case series or retrospective comparisons.^{9-21,24} There are only a few prospective studies but even these are not very helpful. For example, in a study by Raju et al.^{4,5} a randomized prospective study was done to compare LAVH-BSO versus TAH-BSO in 80 patients. The study showed a significant increase in operative time, (100 vs. 57 minutes in the LAVH-BSO group vs. the TAH-BSO group); quicker recovery & return to work earlier in the LAVH-BSO group; and a shorter hospital stay; (3.5 days in the LAVH-BSO group vs. 6 days in the TAH-BSO group), which led to an overall decrease in cost. One problem with this study is that the majority of patients in our community stay only three days after a total abdominal hysterectomy and two to three days after a laparoscopic assisted vaginal hysterectomy.

In 1995, Munro et al.⁶ did a review of the literature, which compared complication rates of laparoscopic hysterectomy versus abdominal hysterectomy versus vaginal hysterectomy. In total abdominal hysterectomy vs. laparoscopic hysterectomy, minor complications were fewer in the LAVH group, 5.4% vs. 7.8% respectively but major complications were greater in the LAVH group 2.5% vs. .9% respectively. Unfortunately, analysis to check for statistical significance could not be done due to the heterogeneity of the studies. Major complications were not always well defined in the studies reviewed but usually included damage to a viscus, conversion to laparotomy due to complications, life threatening cardiopulmonary or thromboembolic events. One encouraging piece of data in this review is that of all 2975 cases reported in the literature, no deaths occurred.

In 1997, a review of the literature was done by Meikle⁷ comparing complications and recovery among LAVH, TAH and VH. 3112 LAVH's, 1618 TAH's and 690 VH's were reviewed. LAVH cases compared with TAH cases demonstrated significantly increased incidence of bladder injury, 1.8% versus .4% respectively; significantly longer operating room time, 115 minutes versus 87 minutes respectively; and significantly shorter hospitalization, 49 hours versus 79 hours respectively. Use of analgesia was consistently less for LAVH than for TAH and return to full activity was always sooner for LAVH when compared to TAH. Cost for the LAVH was higher in seven out of eleven studies, but the remaining four studies showed a lower cost for LAVH when both disposable instruments and length of hospital stay were considered.

Dorsey et al.⁸ published a review of 1049 patients who underwent hysterectomy. 26% were LAVH's, 54% TAH's & 20% VH's. The mean total charges (facility plus professional fee) were \$6,116.00, \$5,084.00 and \$4,221.00 respectively, this was statistically significant. The hospital stays were 2.6, 3.9 and 2.9 days respectively, (these numbers are closer to the hospital stays in our community). The conclusion was that despite shorter hospital stays, in-hospital charges and costs for LAVH are higher than for either alternative procedure, most likely due to use of disposable instruments and

longer operating room times. One must note that the cost savings of time to return to work were not included in the financial analysis.

In general in a review of the studies in comparing laparoscopic hysterectomy versus total abdominal hysterectomy, the following are usually shown:^{8-13, 15, 17-19, 21-23}

1. LAVH has a longer operating time than TAH
2. LAVH has a decreased hospital stay than TAH
3. LAVH has a decreased use of narcotic analgesics postoperatively than TAH
4. LAVH has decreased postoperative pain postoperatively versus TAH
5. LAVH has a decreased time to resumption of normal activity versus TAH

The cost of LAVH vs. TAH depends on the types of instruments used and endpoints studied. If one uses a large amount of disposable instruments, has longer operating times and the cost analysis only includes the operation itself, LAVH is more expensive. If one uses mostly nondisposable instruments and the cost analysis includes both hospital stay and money saved by faster time to return to work, there can be a savings with LAVH.

The only thing one can say for sure is that the incisions in laparoscopic assisted vaginal hysterectomy are smaller than total abdominal hysterectomy, making it a cosmetically more appealing procedure.

Summary

In conclusion, laparoscopically assisted vaginal hysterectomy is a procedure which is widely used. Most authorities agree on one thing, LAVH is not a substitute for vaginal hysterectomy. The role of LAVH should be to convert abdominal hysterectomies to vaginal hysterectomies. The problem at this time is that the procedure is so consumer driven that it is almost impossible to perform good randomized prospective studies comparing the two. In the review by Meikle, the author noted that to perform a randomized trial of LAVH versus TAH large enough to detect a 50% increase in injuries based on a 4% incidence of combined major complications, one would require 1461 patients in each arm to perform a one-tailed test at an alpha of .05 and with 80% power. Even with the lack of good data, this author feels that if both the surgeon and patient carefully think out the mode of surgery, there is a role for this procedure in gynecology.

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Laparoscopic Treatment of Uterine Myomas

Elbert Tomai MD, FACOG

The treatment of leiomyomas of the uterus has traditionally been by laparotomy. Newer endoscopic instruments are enabling gynecologists to treat these common tumors with minimally invasive surgery, resulting in same day or overnight hospitalization and much shorter recovery times. The laparoscope is one of the endoscopic instruments that is allowing the to occur.

Leiomyomas of the uterus are one of the most common tumors of the uterus, estimated to occur in 20% to 25% of women of reproductive age. A myoma is a benign smooth muscle tumor that occurs as a discrete elliptically spheroid pseudoencapsulated mass in and around the uterus. Various names have been given to these tumors such as fibroids, fibromyomas, leiomyomas, myomas, and in the Negro population that has the highest incidence, "fire balls." The location of the leiomyoma determines its classification. They all start off as intramural or within the walls of the uterus. As they enlarge most stay within the walls and remain intramural. Others will grow towards the surface and bulge above the serosa to varying degrees and become known as subserosal. Still others will grow towards the endometrium and bulge into the endometrial cavity and become known as submucosal. Subtypes of the subserous and submucosal are called by their location - pedunculated (attached by a stalk), intraligamentous (between the leaves of the broad ligament), parasitic (completely detached from the uterus), and fibroid

polyp (on a stalk protruding thru the cervix). They can also develop in the cervix and be known as cervical myomas. These tumors vary considerably in size from a few millimeters to 50 pounds and grow at equally varying rates. This growth is estrogen dependent so they are rarely found before menarche and rarely develop or enlarge postmenopausally. Rapid growth can occur during pregnancy.¹

The majority of uterine myomas are asymptomatic and are only noted on routine pelvic examinations. The symptoms that do occur fall into four areas. The increasing size of the tumors may cause pelvic pressure or heaviness, abdominal enlargement, or urinary frequency. Pain may be caused by rapid growth and degeneration or by torsion of a pedunculated myoma. Excessively heavy bleeding is caused by the submucous variety. Infertility may stem from blockage of the fallopian tubes, repeated abortions from the submucous type, endometrial changes preventing implantation, or possible biochemical changes interfering with sperm transport. Sarcomatous degeneration rarely occurs somewhere in the order of less than 0.1% of women with leiomyomas.²

The diagnosis of uterine myomas is usually made on bimanual pelvic examination and confirmed with pelvic ultrasound, although CT and MRI can do the same but at higher cost. The main thing to be ruled out is an adnexal mass, especially an ovarian carcinoma. Once the diagnosis is definitively made the patient is educated about leiomyomas. Then comes the question of management. There are no known preventive measures for these tumors and no long term medical therapies. Because the majority are asymptomatic, the keynote to management is prudent observation with pelvic examinations and sometimes ultrasound between 3 and 12 months apart. If treatment is needed, short term medical therapies are available as well as various surgical procedures. The factors that need to be considered in determining treatment are location and size of the myomas, coexisting pathology, symptoms of the patient, her age and reproductive status, and lastly her desires. A suggested workup of the patient would include a careful ultrasound mapping of the locations and sizes of the fibroids, doppler examination of the blood supply, a hematocrit and hemoglobin, a biopsy of the endometrium and possibly a bone density.³

Prior to the development of endoscopic surgery including operative laparoscopy and hysteroscopy, patients with symptomatic leiomyomas were treated by hysterectomy, usually abdominally and sometimes vaginally. Hysterectomy is the second most common operation in the United States. In 1985 of the 97 million women over the age of 15 years, approximately 18.5 million had undergone a hysterectomy. On occasion a transabdominal myomectomy was done to relieve symptoms but preserve fertility or because the woman desired to retain her uterus. These are major surgical procedures requiring postoperative stays of 3 to 6 days and 4 to 8 weeks

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total recovery time. Because of the mortality and morbidity associated with major surgical procedures, any operation that will relieve the symptoms of fibroids while avoiding major surgery deserves consideration.² With the recent advent of operative endoscopic surgery more options are available to both the physician and the patient. Among the choices available now are laparoscopic assisted vaginal hysterectomy and its various modifications, laparoscopic myomectomy using electrosurgery, lasers or harmonic scalpels, laparoscopic myolysis using lasers, bipolar needles with electrical current, hyperthermia electrodes (diathermy),¹⁰ or hypothermia probes (cryomyolysis), and hysteroscopic resection or vaporization of submucous myomas.⁹ The laparoscopic assisted vaginal hysterectomy will be discussed in another section of this issue. I only need to mention here that it can convert an abdominal hysterectomy to a vaginal one with a shorter hospital stay and shorter overall recovery time. The other procedures are done on an outpatient basis with no hospital stay and even shorter recovery times. Three things seem to be driving the use of these newer procedures. One is technologic advances with a myriad of endoscopic instruments, improved scopes and video systems and high flow insufflation systems. Another is the push from managed care to lower costs. Lastly there has developed a feeling among some women to have lesser procedures done to them than the traditional hysterectomy. Some of this comes from not wanting to go through a long recovery period but also from not wanting to lose part of their femininity.⁴

Myomectomy done through an abdominal incision has always been considered to be a more difficult and morbid procedure than an abdominal hysterectomy. Doing the myomectomy through a laparoscope is even more difficult and requires much greater surgical skill. The choice of doing an abdominal or laparoscopic myomectomy depends on the surgeon's skill and experience. The difficulties involve removing the myoma from the uterus without losing much blood, suturing the defect in the uterine wall, then removing the myoma which may be 2 to 6 cm in diameter from the abdomen where the largest incision is a 1-2 cm. This procedure can be likened to making an incision in the skin of an orange and removing the central portion (the myoma). The hole that is left needs to be closed with a series of sutures so that there is no remaining defect and the surface of the orange is smooth again. The central portion is then morcellated or cut into chip size pieces for removal. If this can be accomplished, it allows the patient to be discharged on the same day of surgery and usually back to work within a week or two.⁵⁻⁸

Because of the technical difficulties with the myomectomy, the technique of laparoscopic myoma coagulation or myolysis was developed first in Germany in 1986 and started in the United States in 1990. It involves destroying the stroma and blood supply of the myoma using the a variety of instruments. The first to be used was a Nd:YAG laser. This procedure succeeded in shrinking the myomas but with a high incidence of postoperative adhesions.¹² The second and currently the most widely used instrument is a bipolar needle which is a 2-pronged 5 cm long needle that is attached to an electrical generator that supplies 70 to 120 watts of continuous power. The needle is inserted into the myoma by perforating it at 10 mm. increments across the serosal surface, extending to the base of the myoma forming parallel cylinders of dessicated denatured tissue. When feasible the myoma is perforated in perpendicular planes to destroy the stroma and its vasculature more completely. A

modification of this technique is to circumferentially perforate the base at 5 mm. intervals to destroy the blood supply to the myoma as much as possible while minimizing thermal damage to the serosal surface. The coagulating effect of this procedure devascularizes the myoma resulting in shrinkage of between 60 to 80 % of the original size. The patient is usually pretreated with a GnRH agonist such as depo Lupron monthly for 3 to 4 months. This synthetic pituitary hormone decreases circulating estrogens which in turn decreases the size of the myomas preoperatively by an average of 38% and the overall uterine size by 30% to 50%. This hormone does two things. First it makes the laparoscopic procedure easier if shrinkage does occur and secondly it eliminates myolysis as an option if shrinkage does not occur. This is because long term shrinkage is less likely after myolysis with these non responsive myomas and it virtually rules out the rare leiomyosarcoma that is not estrogen dependent. For women with submucous myomas the myolysis procedure can be combined with operative hysteroscopy to remove this type of myoma. The myoma in this case is shaved into chips or vaporized much as in a transurethral prostate resection. Success rates with these procedures in eliminating symptoms are reported at better than 90%. Currently myolysis shows great promise in reducing the need for hysterectomies for myomas especially in perimenopausal women. It appears to be a safe effective alternative to hysterectomy by avoiding major surgery and having a shorter recovery time.¹¹

This area of laparoscopic surgery for myomas is constantly evolving. Other techniques of coagulation are being investigated as well as testing which are the most effective. The use of color doppler ultrasound to determine where the feeding vessels are located as well as its use intraoperatively to evaluate vascular destruction during coagulation are also being studied. There is also one investigator who is exploring cryotherapy to devascularize the myomas.

As was stated earlier in this paper the push to develop alternatives to abdominal hysterectomy for uterine myomas has opened up a wide array of choices for both physician and patient. The future will probably bring in not only other laparoscopic technologies but other areas as well such as interventional radiologists obliterating the vascular supply of the myomas or long term medical therapies for these common tumors of women.

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Laparoscopic Sterilization

Nathan Fujita, MD

Laparoscopic tubal ligation is an effective means of permanent sterilization. The recently released CREST study underscores the need for proper patient selection and counseling.

Permanent sterilization is the most popular method of contraception for married couples in the United States.¹ During laparoscopy's early years in the 1970's, tubal sterilization was the first operative procedure undertaken by gynecologists. The fallopian tubes were easily accessible, and the procedure was usually quick and bloodless. Failure rates from laparoscopic sterilization were thought to be low, in the range of 3-4 per thousand.

Different techniques to destroy a segment of the tube were employed. Palmer used unipolar tubal coagulation in 1962.² Forceps grasped the tube, and current was applied to the held end. The current was applied from the forceps through the patient's body and exited through a ground plate, or a return electrode, placed on the patient's body. The resultant tissue injury was large and extended far beyond the area that was grasped. The unipolar electrical procedure was associated with serious complications from capacitation of the electrical charge which caused bowel burns when the coagulating current discharged to adjacent bowel.

In 1972, the bipolar forcep was designed for tubal sterilization.³ This method differed from the unipolar system in that current flowed only through the jaws of the forceps and not the patient. There was no danger for capacitation. The tissue damage was minimal, discrete and localized. An ampmeter was added to this system so the surgeon knew when coagulation was complete.

Mechanical occlusion devices were also designed during this early period. The Hulka Clip⁴ was a spring loaded clip with interlocking teeth that obliterated the tubal lumen when closed. Only 3-4 mm of tube was damaged by the clip. This method was associated with the best tubal reversal success due to the minimal damage

incurred. Yoon⁵ devised the Falope Ring: a silastic ring which was loaded over the sheath of an applicator forcep. A loop of tube was drawn up within the central hollow cylinder of the ring applicator. The ring was then released over the looped fallopian tube and the occluded segment became devascularized and necrosed.

More recently, the CREST study – the U.S. Collaborative Review of Sterilization⁶ – presented in September 1995, has caused many gynecologists to re-evaluate their methodology. This study recruited more than 10,000 women from 16 medical centers including Hawaii, and was the first long-term study of patients 8-14 years after sterilization.

The results from the CREST study were surprising. Failure rates depended on the method, age of the patient and the timing of the procedure. The overall failure rate was 1.9% - more than triple the quoted standard failure rate for tubal sterilization. The failure rates differed on method. Postpartum partial salpingectomy had the lowest failure rate of 0.8%, followed by unipolar coagulation. As noted previously, complications from unipolar coagulation was most likely to result in serious injury or death. The next effective method was the Falope Ring with a relative risk of pregnancy of 2.34, followed by bipolar coagulation with a RR of 3.2. The Hulka Clip had the highest failure rate of 3.7RR.

It was once believed that the first year after sterilization was when most failures occurred; the CREST data showed that this too was a myth. Cumulative failure rates rose steadily through ten years post-sterilization. The risk of failure was greatest in younger women, presumably due to their many years of potential fertility. Thirty three percent of the failures were ectopic pregnancies, which heightened our surveillance for this potentially life-threatening occurrence.

The CREST study should shed more light on the "Post-Tubal Ligation Syndrome" as well. Studies thus far have been too short – term to determine if such an entity truly exists. Common symptoms attributed to the syndrome include pelvic pain, change in sexual behavior, changes in mental status, alteration of menstrual cycles, increased blood loss and exacerbation of PMS.

In summary, laparoscopic tubal ligation is an effective means of permanent contraception. Patients must be carefully selected and counseled for risks of long-term failure.

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CONTRAINDICATIONS: ATACAND is contraindicated in patients who are hypersensitive to any component of this product.

WARNINGS: Fetal/Neonatal Morbidity and Mortality: Drugs that act directly on the renin-angiotensin system can cause fetal and neonatal morbidity and death when administered to pregnant women. Several dozen cases have been reported in the world literature in patients who were taking angiotensin converting enzyme inhibitors. When pregnancy is detected, ATACAND should be discontinued as soon as possible. The use of drugs that act directly on the renin-angiotensin system during the second and third trimesters of pregnancy has been associated with fetal and neonatal injury, including hypotension, neonatal skull hypoplasia, anuria, reversible or irreversible renal failure, and death. Oligohydramnios has also been reported, presumably resulting from decreased fetal renal function; oligohydramnios in this setting has been associated with fetal limb contractures, craniofacial deformation, and hypoplastic lung development. Prematurity, intrauterine growth retardation, and patent ductus arteriosus have also been reported, although it is not clear whether these occurrences were due to exposure to the drug. These adverse effects do not appear to have resulted from intrauterine drug exposure that has been limited to the first trimester. Mothers whose embryos and fetuses are exposed to an angiotensin II receptor antagonist only during the first trimester should be so informed. Nonetheless, when patients become pregnant, physicians should have the patient discontinue the use of ATACAND as soon as possible. Rarely (probably less often than once in every thousand pregnancies), no alternative to a drug acting on the renin-angiotensin system will be found. In these rare cases, the mothers should be apprised of the potential hazards to their fetuses, and serial ultrasound examinations should be performed to assess the intra-amniotic environment. If oligohydramnios is observed, ATACAND should be discontinued unless it is considered life saving for the mother. Contraction stress testing (CST), a nonstress test (NST), or the biophysical profiling (BPP) may be appropriate, depending upon the week of pregnancy. Patients and physicians should be aware, however, that oligohydramnios may not appear until after the fetus has sustained irreversible injury. Infants with histories of *in utero* exposure to an angiotensin II receptor antagonist should be closely observed for hypotension, oliguria, and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion. Exchange transfusion or dialysis may be required as means of reversing hypotension and/or substituting for disordered renal function. There is no clinical experience with the use of ATACAND in pregnant women. Oral doses ≥ 10 -mg candesartan cilexetil/kg/day administered to pregnant rats during late gestation and continued through lactation were associated with reduced survival and an increased incidence of hydronephrosis in the offspring. The 10-mg/kg/day dose in rats is approximately 2.8 times the maximum recommended daily human dose (MRHD) of 32 mg on a mg/m² basis (comparison assumes human body weight of 50 kg). Candesartan cilexetil given to pregnant rabbits at an oral dose of 3 mg/kg/day (approximately 1.7 times the MRHD on a mg/m² basis) caused maternal toxicity (decreased body weight and death) but, in surviving dams, had no adverse effects on fetal survival, fetal weight or on external, visceral, or skeletal development. No maternal toxicity or adverse effects on fetal development were observed when oral doses up to 1000-mg candesartan cilexetil/kg/day (approximately 138 times the MRHD on a mg/m² basis) were administered to pregnant mice. **Hypotension in Volume- and Salt-Depleted Patients:** In patients with an activated renin-angiotensin system, such as volume- and/or salt-depleted patients (e.g., those being treated with diuretics), symptomatic hypotension may occur. These conditions should be corrected prior to administration of ATACAND, or the treatment should start under close medical supervision. If hypotension occurs, the patients should be placed in the supine position and, if necessary, given an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further treatment which usually can be continued without difficulty once the blood pressure has stabilized.

PRECAUTIONS: General: Impaired Renal Function: As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals treated with ATACAND. In patients whose renal function may depend upon the activity of the renin-angiotensin-aldosterone system (e.g., patients with severe congestive heart failure), treatment with angiotensin converting enzyme inhibitors and angiotensin receptor antagonists has been associated with oliguria and/or progressive azotemia and (rarely) with acute renal failure and/or death. Similar results may be anticipated in patients treated with ATACAND. In studies of ACE inhibitors in patients with unilateral or bilateral renal artery stenosis, increases in serum creatinine or blood urea nitrogen (BUN) have been reported. There has been no long-term use of ATACAND in patients with unilateral or bilateral renal artery stenosis, but similar results may be expected. **Information for Patients:** **Pregnancy:** Female patients of childbearing age should be told about the consequences of second- and third-trimester exposure to drugs that act on the renin-angiotensin system, and they should also be told that these consequences do not appear to have resulted from intrauterine drug exposure that has been limited to the first trimester. These patients should be asked to report pregnancies to their physicians as soon as possible. **Drug Interactions:** No significant drug interactions have been reported in studies of candesartan cilexetil given with other drugs such as glyburide, nifedipine, digoxin, warfarin, hydrochlorothiazide, and oral

contraceptives in healthy volunteers. Because candesartan is not metabolized by the cytochrome P450 system and has no effects on P450 enzymes, interactions with drugs that inhibit, or are metabolized by those enzymes would not be expected. **Pregnancy: Pregnancy Categories C** (first trimester) **and D** (second and third trimesters). See WARNINGS, Fetal/Neonatal Morbidity and Mortality. **Nursing Mothers:** It is not known whether candesartan is excreted in human milk, but candesartan has been shown to be present in rat milk. Because of the potential for adverse effects on the nursing infant, a decision should be made whether to discontinue nursing or discontinue the drug, taking into account the importance of the drug to the mother. **Pediatric Use:** Safety and effectiveness in pediatric patients have not been established. **Geriatric Use:** Of the total number of subjects in clinical studies of ATACAND* (candesartan cilexetil), 21% were 65 and over, while 3% were 75 and over. No overall differences in safety or effectiveness were observed between these subjects and younger subjects, and other reported clinical experience has not identified differences in responses between the elderly and younger patients, but greater sensitivity of some older individuals cannot be ruled out. In a placebo-controlled trial of about 200 elderly hypertensive patients (ages 65 to 87 years), administration of candesartan cilexetil was well tolerated and lowered blood pressure by about 12/6 mmHg more than placebo.

ADVERSE REACTIONS: ATACAND has been evaluated for safety in more than 3600 patients/subjects, including more than 3200 patients treated for hypertension. About 600 of these patients were studied for at least 6 months and about 200 for more than at least 1 year. In general, treatment with ATACAND was well tolerated. The overall incidence of adverse events reported with ATACAND was similar to placebo. The rate of withdrawals due to adverse events in all trials in patients (7510 total) was 3.3% (i.e., 108 of 3260) of patients treated with candesartan cilexetil as monotherapy and 3.5% (i.e., 39 of 1106) of patients treated with placebo. In placebo-controlled trials, discontinuation of therapy due to clinical adverse events occurred in 2.4% (i.e., 57 of 2350) of patients treated with ATACAND and 3.4% (i.e., 35 of 1027) of patients treated with placebo. The most common reasons for discontinuation of therapy with ATACAND were headache (0.6%) and dizziness (0.3%). The adverse experiences that occurred in placebo-controlled clinical trials in at least 1% of patients treated with ATACAND and at a higher incidence in candesartan cilexetil (n=2350) than placebo (n=1027) patients included back pain (3% vs. 2%), dizziness (4% vs. 3%), upper respiratory tract infection (6% vs. 4%), pharyngitis (2% vs. 1%), and rhinitis (2% vs. 1%). The following adverse experiences occurred in placebo-controlled clinical trials at a more than 1% rate but at about the same or greater incidence in patients receiving placebo compared to candesartan cilexetil: fatigue, peripheral edema, chest pain, headache, bronchitis, coughing, sinusitis, nausea, abdominal pain, diarrhea, vomiting, arthralgia, albuminuria. Other potentially important adverse events that have been reported, whether or not attributed to treatment, with an incidence of 0.5% or greater from the more than 3200 patients worldwide treated with ATACAND are listed below. It cannot be determined whether these events were causally related to ATACAND. **Body as a Whole:** asthenia, fever, **Central and Peripheral Nervous System:** paraesthesia, vertigo, **Gastrointestinal System Disorder:** dyspepsia, gastroenteritis, **Heart Rate and Rhythm Disorders:** tachycardia, palpitation, **Metabolic and Nutritional Disorders:** creatine phosphokinase increased, hyperglycemia, hypertriglyceridemia, hyperuricemia, **Musculoskeletal System Disorders:** myalgia, **Platelet/Bleeding-Clotting Disorders:** epistaxis, **Psychiatric Disorders:** anxiety, depression, somnolence, **Respiratory System Disorders:** dyspnea, **Skin and Appendages Disorders:** rash, sweating increased, **Urinary System Disorders:** hematuria. Other reported events seen less frequently included angina pectoris, myocardial infarction, and angioedema. Adverse events occurred at about the same rates in men and women, older and younger patients, and black and nonblack patients. **Laboratory Test Findings:** In controlled clinical trials, clinically important changes in standard laboratory parameters were rarely associated with the administration of ATACAND. **Creatinine, Blood Urea Nitrogen:** Minor increases in blood urea nitrogen (BUN) and serum creatinine were observed infrequently. **Hyperuricemia:** Hyperuricemia was rarely found (19 or 0.6% of 3260 patients treated with candesartan cilexetil and 5 or 0.5% of 1106 patients treated with placebo). **Hemoglobin and Hematocrit:** Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.2 grams/dL and 0.5 volume percent, respectively) were observed in patients treated with ATACAND alone but were rarely of clinical importance. Anemia, leukopenia, and thrombocytopenia were associated with withdrawal of one patient each from clinical trials. **Potassium:** A small increase (mean increase of 0.1 mEq/L) was observed in patients treated with ATACAND alone but was rarely of clinical importance. One patient from a congestive heart failure trial was withdrawn for hyperkalemia (serum potassium = 7.5 mEq/L). This patient was also receiving spironolactone. **Liver Function Tests:** Elevations of liver enzymes and/or serum bilirubin were observed infrequently. Five patients assigned to candesartan cilexetil in clinical trials were withdrawn because of abnormal liver chemistries. All had elevated transaminases. Two had mildly elevated total bilirubin, but one of these patients was diagnosed with Hepatitis A.

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Laparoscopy for Chronic Pelvic Pain

Jon H. Morikawa, MD

Chronic Pelvic Pain (CPP) is a challenging and sometimes frustrating problem for the clinician to manage. Unlike acute pelvic pain which usually has a straight forward diagnosis and treatment, CPP is more elusive and may have multiple medical, psychological, and social components. The laparoscope has proven to be a helpful tool in the evaluation of CPP. Diagnostic laparoscopy can be used to sort out the many underlying disorders contributing to CPP and operative laparoscopy can be used to successfully treat many of these disorders.

The initial evaluation of a patient with CPP should include a thorough history since this will focus the remainder of the work-up and avoid unnecessary diagnostic studies. Areas to specifically address are:

- Duration of pain
- Cyclicity (especially in relation to menses)
- Location (unilaterality or bilaterality)
- Severity and character of pain
- Any associated deep dyspareunia
- Any relation to gastrointestinal or urinary functions

A complete physical exam including a detailed pelvic exam should attempt to reproduce the pain while searching for abnormalities such as bladder tenderness, cervical motion tenderness, adnexal masses/tenderness, uterosacral ligament nodularity, fixed/poorly mobile uterus, enlarged boggy uterus, and pelvic sidewall tenderness. A rectovaginal exam should also be performed to evaluate for masses and better assess the posterior cul-de-sac.

Routinely ordering diagnostic imaging studies such as ultrasonography as part of the CPP work-up is generally not useful or cost-effective unless a specific abnormality has been found on physical exam such as a pelvic mass. Transvaginal ultrasound is usually more sensitive than transabdominal scanning in evaluating the pelvis.¹ Other studies such as barium enema, intravenous pyelogram, colonoscopy, computed tomography, or magnetic resonance imaging may be appropriate if specific clinical conditions are suspected.

The complete work-up may require a multidisciplinary approach with consultation from the gynecologist, urologist, and gastroenterologist. Since CPP can produce significant stress, depression, anxiety, and somatization, involvement of a psychiatrist, psychologist, or physical therapist may be helpful; especially in the situation where the work-up does not uncover an etiology.

As part of the gynecologist's work-up, a laparoscopy may be recommended. The goal of laparoscopy is to find and appropriately treat any underlying or contributing somatic or visceral pathology.² Compared with laparotomy, the major advantages of laparoscopy are magnification, visualization of otherwise hard-to-see spaces (diaphragmatic surfaces, cul-de-sac), minimal intraoperative trauma, low morbidity, fast recovery, and low cost.³

During the laparoscopy, it is important to follow a systematic and thorough approach. After inserting the laparoscope, a general survey of the pelvis is performed. Preoperative pelvic mapping of painful areas is essential in guiding this portion of the procedure. The organs and areas that correlate with pelvic tenderness are carefully inspected for scarring or other lesions. All surfaces of the ovaries as well as the adjacent pelvic sidewall, fallopian tubes, and broad ligaments are next inspected. Then the anterior and posterior cul-de-sacs are evaluated followed by inspection of the appendix, visible bowel, omentum, liver, and diaphragm.²

Endometriosis or adhesive disease are the most commonly found conditions in patients who undergo laparoscopy for CPP.⁴ Other conditions that may contribute to CPP include chronic pelvic inflammatory disease, pelvic congestion, ovarian cysts, fibroids, malignancies, diverticulosis, and hernias. Non-visible causes of CPP include adenomyosis, myofascial pain, and muscle spasm.

Only about 60% of women with CPP have a pathologic cause detectable by laparoscopy;⁵ therefore, there is a significant chance the laparoscopy may be negative and the patient must be properly prepared for this possible outcome. Interestingly, a negative laparoscopy in itself can sometimes be therapeutic with patients reporting improvement or resolution of their pain.

With the rapid evolution of advanced operative laparoscopy over the past two decades, many conditions causing CPP can now be surgically managed through the laparoscope. For example endometriosis or adhesions can be treated laparoscopically using a

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variety of techniques such as laser, electrosurgery, or sharp dissection. When conservative treatment fails or if adenomyosis is suspected, a hysterectomy may be decided upon and laparoscopic hysterectomy is now an alternative for select patients. Controversial denervation procedures such as laparoscopic presacral neurectomy and LUNA (Lapraoscopic Uterine Nerve Ablation) have also been tried in the treatment of CPP.

Some of the surgical procedures which have been performed laparoscopically for the treatment of CPP⁵

Ablation of endometriosis

Adhesiolysis

Appendectomy

Hysterectomy

Ovarian cystectomy

Oophorectomy

Presacral neurectomy

Resection or excision of endometriosis

Resection of persistent omphalomesenteric ligament

Salpingectomy

Uterosacral nerve resection or ablation

Uterine suspension

In the future as instrumentation becomes smaller, better, and less expensive, office diagnostic laparoscopy under local anesthesia may become more commonplace. This would be particularly useful in mapping out the painful sites since the patient is consciously sedated and able to confirm pain as various sites are touched or manipulated.¹ However, for now, laparoscopy is usually performed as an outpatient operating room procedure under general anesthesia.

Laparoscopy is not the panacea for CPP; however, when preceded by a thorough evaluation, it can be a powerful diagnostic tool which provides crucial information for subsequent management. Moreover the operative capabilities have also made this an ideal minimally invasive therapeutic tool for the surgically correctable causes of CPP.

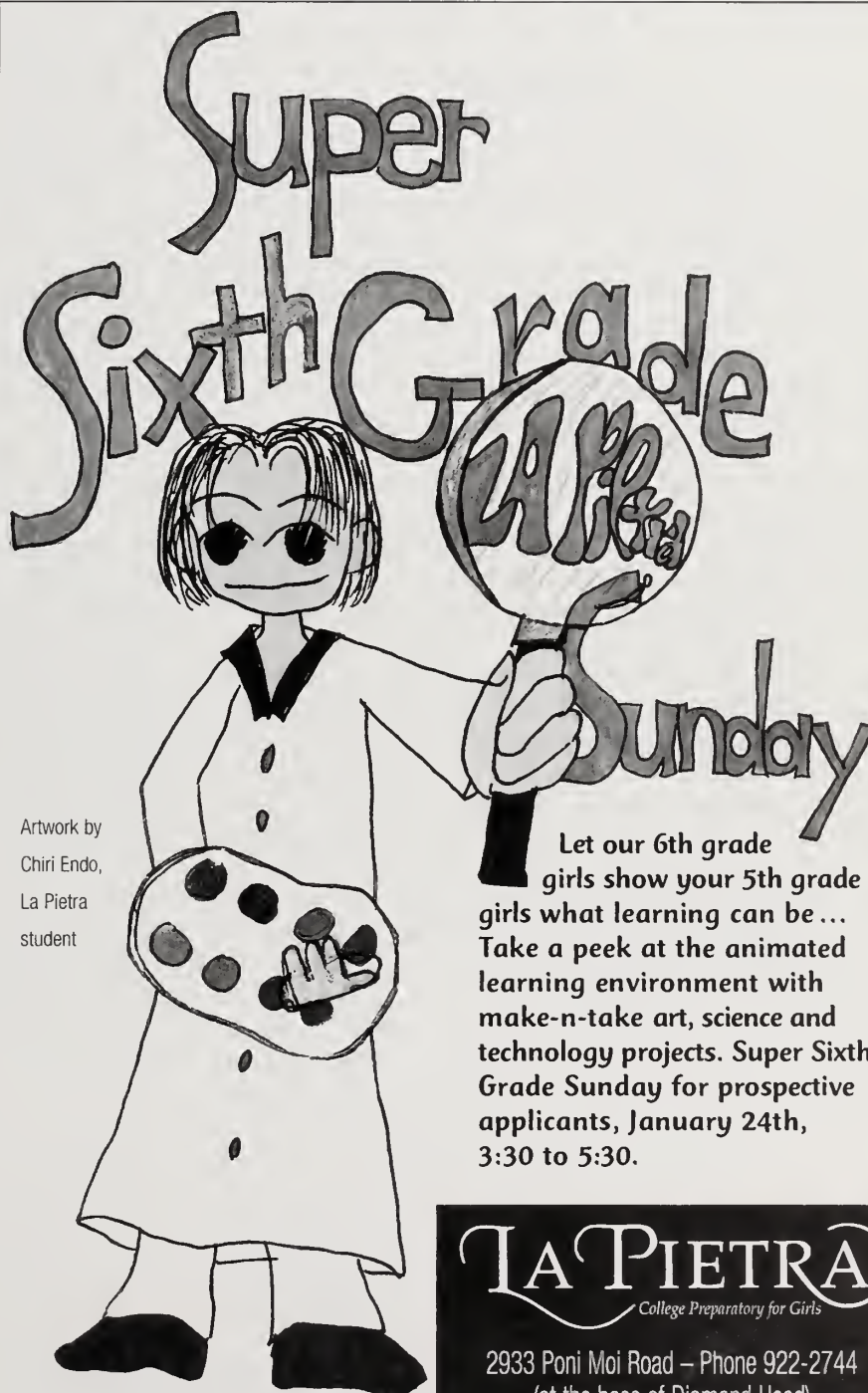
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It's All in the Genes

What You Should Know About the Future of Health Care

A drop of your blood contains the blueprint, or genetic code, for your entire body. Our genes will soon become like a reference book to our bodies, revealing good news (you don't have the gene which makes you "susceptible" to breast cancer) or bad news (you are predisposed to heart disease).

In the near future, when you visit your doctor for a routine physical, he may take a drop of your blood, have it analyzed by a DNA decoder and produce a complete genetic profile for you. The estimated 80,000 genes on the 46 chromosomes of the human cell are being sequenced by the Human Genome Project, which has a projected completion date of 2001. Researchers have so far identified approximately 770 genes that cause specific human diseases, with the number going up on a weekly basis.

But what good is it to know the bad news about your genes—something you are born with? Physicians hope to replace defective genes with good ones or to treat people with drugs that turn bad genes off. Bad genes can directly cause diseases, such as in cystic fibrosis. Other genes cause "susceptibility," or a predisposition to disease if the person is exposed to specific environmental toxins or other factors caus-

ing those genes to malfunction.

The genetic code, or language, is beginning to make sense, giving rise to the field of gene therapy. Promising research indicates that the future of health care may be in the genes. For example, experimental gene therapy is being conducted for many cancers. These include cancers of the lung, brain, central nervous system, colon, liver, ovaries and pancreas. Scientists are making gains in gene therapy for other diseases such as heart disease, cystic fibrosis, high blood pressure, Alzheimer's disease, musculoskeletal diseases and arthritis. Gene therapy also has the potential to permanently cure selected genetic diseases.

A major obstacle in gene therapy is the effective delivery of normal genes to specific targets (like cancer cells) and have the genes continuously operate at levels that will help a patient. Many gene therapy experiments use modified viruses as "vectors" that shuttle gene coding into cells like microscopic delivery trucks. Viruses have specialized mechanisms which allow them to bind to specific types of cells and deliver their gene cargo inside the cell. The cells should then "express," or manufacture, the needed proteins (which correctly carry out necessary functions of the cell) specified by the introduced gene. In the case of viral vectors, bits of virus DNA are removed to cripple the virus, so it can infect cells but not reproduce.

Non-viral vectors are also being used to deliver corrective genes to cells. The use of minute, hollow orbs called lipoplexes are being studied. Composed of a lipid (fatty) membrane on the outside and a watery solution on the inside, lipoplexes can be created with

DNA cargo. Lipoplexes are absorbed by cells and disperse their DNA after entering the cell membrane. The DNA then enters the nucleus of the cell.

Currently, many gene therapy experiments are taking an approach focused on using "suicide" genes to alter specific cells—such as cancer or HIV-infected cells—to produce proteins which make them vulnerable to attack by drugs or by the body's immune system.

Gene therapy may also be able to prevent inherited diseases at the very beginnings of life. If separated at a very early stage, embryonic cells have the ability to regenerate whole embryos (that's how identical twins arise). By artificially separating the embryonic cells, gene therapy can alter the DNA of one—say to correct sickle cell anemia—and return it to the mother for gestation. The embryo becomes a healthier clone of itself.

The anatomical view of the human body has given way to the genetic view. Once completed, the Human Genome Project will be for the practice of medicine what reaching the moon was to space exploration. With it, the diagnosis and treatment of human diseases may be far more successful than anyone could have imagined even a decade ago. The promises of genetic medicine now seem attainable. The future of health care is in the genes.

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Medical School Hotline

The Role of Research In Medical Education

Loren G. Yamamoto, MD, MPH, MBA
Professor, Department of Pediatrics
John A. Burns School of Medicine

While the majority of most physicians' time is not devoted to conducting research, the practice of medicine is influenced by the results of medical research conducted by others. Thus, while it may not be of paramount importance for most physicians to be able to conduct medical research on their own, it is very important for practicing physicians to be able to incorporate the results of medical research published in the literature, into their current practice.

Medical Student: "Did you know that trauma is the second most common cause of death?"

Reply: That's only if the leading cause of death was lumped into "non-trauma." You see, I could make my favorite disease seem very important by manipulating statistics to my advantage. Even though the numbers are accurate, this would still be deceptive. To avoid being deceived, there must be a proper understanding of epidemiologic terms.

Pediatric Resident: "I read in a textbook that febrile seizures occur because of a rapid rise in temperature, rather than with a high temperature alone."

Reply: Just because you read it in a book, does not make it a fact. How would you design a study to prove that febrile seizures occur only when the temperature rises quickly? It would be impossible from a practical standpoint since it would require frequent temperature measurements (every 15 minutes) on many febrile children who are destined to have febrile seizures in the next few hours. Enrolling such patients for a study would be impossible. Some statements in a textbook are actually someone's opinion (rather than fact) which may or may not be provable with research.

Attending Physician: "Are calcium channel blockers efficacious and safe?"

Reply: In an article examining published studies addressing this question, a strong relationship between the recommendation of the authors and their financial affiliation with calcium channel blocker pharmaceutical companies was found (1), suggesting that the recommendation of the author may be influenced (unknowingly or knowingly) by financial considerations. Yet, a commentary from a journal editor concludes by affirming trust in the peer review process and the ability of readers to make their own judgments concerning the scientific validity of published material independent of potential financial conflicts (2). When can practicing physicians believe the recommendations of editorials and experts?

Medical Journal Editors: "How good is our editorial board at filtering the information being published in a journal?"

Reply: Although journal editorial reviewers and editorial board members are selected for their expertise in research publications and editorial abilities, a study investigating the editorial reviewers of a prominent medical journal found many deficiencies in their ability

to identify flaws in a test manuscript sent to them for publication consideration review (3). Thus, this study has demonstrated that the editorial review process is not perfect. Some journals are notably better at this than others.

So what is the role of research in medical education? Perhaps the question that medical educators (who design medical school curricula, residency training programs and continuing medical education programs for practicing physicians) must ask, can be rephrased as follows:

Medical Educators: "How much epidemiology, statistics, research methodology and scientific writing do practicing physicians need to know?"

Reply: Of course there is no definitive answer to this question. Physicians could benefit from more extensive formal training in many areas such as nutrition, sociology, law, laboratory methods, alternative medicine, public health, environmental engineering, computer science, telecommunications, business, etc. More formal training in epidemiology, statistics, research methodology and scientific writing could very well be justified. But a physician's time is limited. We cannot learn all things about all subjects. It cannot be universally agreed upon that one of these subject areas is substantially more beneficial for a physician than another subject area.

Advocate of medical research training would like to use this opportunity to push for more time in a medical education curriculum, but from a practical standpoint, medical research training must compete with all the other educational elements in a physician's training program in medical school, residency and continuing medical education.

Ideally, all physicians should be able to read a medical article and be able to perfectly critique it, identifying all its flaws and weaknesses, to place its conclusions and recommendations in their proper perspective. The amount of training time required to typically achieve this level of medical editorial expertise is simply not available in the educational curriculum for most physicians.

How do most practicing physicians read a medical article? It is likely that most medical articles are not read in sufficient depth to adequately critique the article; in other words, to assess the quality of its conclusions and recommendations. To save time, a physician may often read only the conclusion section of an article's abstract. This might sound sloppy, but in reality, our time is limited. Since most medical articles and textbooks are already reviewed by expert editors, this information has already been filtered for physicians. Thus, a physician's time may be better spent learning medicine rather than learning to critically interpret the results of medical literature that has already been scrutinized by an expert editor. Editors of a textbook or medical journal should be held primarily responsible for the critique and editing of an article, so that practitioners subscribing to the journal (selected for its area of medical interests) are exposed only to medical research which is pertinent, valid and placed in proper perspective.

This is not to minimize the role of medical students, residents and practicing physicians in medical research. Some will be more interested in research than others. Medical students, residents and practicing physicians can make substantial contributions to medical research. Those who want to contribute, should be encouraged to step forward. Our community is fortunate to have a medical school that has devoted some valuable curriculum space to critical appraisal and evidenced based medicine. We have a school of public health


with introductory courses and advanced degree programs in biostatistics and epidemiology, in addition to other university departments such as the colleges of engineering and business administration that have willingly provided their expertise in assisting with medical research. We have several community medical centers actively sponsoring and fostering medical research, providing training sessions in research methodology.

Rather than impose medical research upon us all, perhaps it would be best to offer such training and/or experiences only to those who have the desire to conduct research or to those who want to enhance their skills at critically evaluating the quality of medical research publications. The faculty of the school of medicine and community

research clinicians should be willing to provide research experience, didactic training sessions and collaborative assistance to medical students, residents and practicing physicians who are interested in any or all aspects of medical research and scientific writing to foster a sense of a research community spirit in the state.

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President: *Patricia L. Chinn MD*

President-elect: *James Lumeng MD*

Secretary: *Philip Hellreich MD*

AMA Delegate: *Allan Kunitomo MD*

Alternate AMA Delegates: *Drs. Frederick C. Holschuh and Stephen J. Wallach*

Speaker of the House: *Herbert K.W. Chinn MD*

Vice-Speaker of the House: *Walter Young MD*

Maui Councilor: *Alfred Arensdorf MD*

Honolulu Councilors(3): *Drs. William Dang Jr., Malcolm Ing, Myron Shirasu*

Peer Review Committee: *Drs. Timothy Crane, Cynthia Goto, Howard Minami, Pierre Pang*

Nominating Committee '98-'99

Kauai: *Gerald McKenna MD*

Maui: *Russell T. Stodd MD*

Hawaii: *Edwin Montell MD*

West Hawaii: *Blase Leeloy MD*

Honolulu: *Drs. Jeanette Chang, Herbert K.W. China, Carl Lehman, Philip McNamee and David Saito*

Past Presidents: *Drs. Leonard Howard and John Spangler*

Sports Awards

Golf Tournament Winners:

Low Gross, *Bradley P. Wong MD*

Low Net, *Jarrett Pang (pharm. rep.) - 1st Place*

William Dang Sr., MD HMA member and perpetual trophy

Tennis Tournament:

1st place: *Ryan Chung Jennifer Kelley MD*

2nd place: *Robert Miller Esper De Leon*

3rd place: *Brent Mukai Antoine Cazin*

Clinical Topics

Highlights of the HMA Scientific Session

Russell Stodd, MD

Friday, October 23, 1998

Why antibiotics are overpriced --

Lawrence J. Eron, MD -

A well presented discussion of over-use of antibiotics, such as with viral URIs, and resistance to drugs. Data was presented showing how resistance to antibiotics disappears when use is curtailed in hospital settings. Many newer drugs are very expensive and use should be limited to necessity. Interesting paper with good slide illustrations.

Proper evaluations of breast lesions --

Bradley D. Wong, MD -

This was the best offering of the morning session to me. Excellent and interesting presentation of breast lesions with good slides, and stimulating question and answer session. When and why to refer to a surgeon was presented with mention of increased law suits relating to delayed diagnosis. Statistics and value of mammography, and how to manage false negatives presented also. Mammography most useful when no palpable lesions. Also discussed appearance and significance of various types of nipple discharge. The presentation was casual, but not wandering. Very good material for clinical use.

Impact of asthma management guidelines on outcomes --

Danilo N. Ablan, MD -

Author presented statistics about social and economic impact of asthma in managed care. Probably useful material for bean counters and money managers.

Evaluation of patients with chest pain --

David J. G. Fergusson, MD -

This was a useful and interesting presentation with emphasis on significance of types of chest pain, e.g. repetitive episodes vs. prolonged pain. Presented pain as coming from the "box" being bones, joints, muscles and nerves vs. "contents" such as heart and pericardium, aorta, lungs and pleura, and esophagus (other GI). A lucid mechanism to help with presumptive diagnosis and appropriate tests and clinical characteristics to establish diagnosis.

Impact of managed care on physician's health: depression and other disorders --

Gerald J. McKenna -

Discussion of changes in physician behavior with managed care, and effects of loss of control to third party, frustrations, insurance hassles, lessening of professional stature, decreasing income--all factors leading to physician depression and sometimes substance abuse. No new or stimulating information or fresh perspective.

Office based cancer screening --

Randal J. Liu, MD -

A good paper. This was appropriate complement to earlier breast cancer discussion with emphasis on GI and prostate evaluation. Methods were described for screening and risk analysis for age and family history for GI disease, and all notes were well organized. The prostate screening centered on digital rectal exam and serum PSA. Value of PSA questioned because of false positives with BPH and prostatitis. Also mentioned PSA reference range dependent on age (higher values with age).

Myron Shirasu, MD, chairman of the annual meeting committee, did excellent job of organizing an interesting meeting with mostly useful material.

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Non-Clinical Topics

Highlights of the HMA Scientific Session

Ben Berg, MD

Overview:

The last two days of the conference were devoted to presentations and discussion of non-clinical topics. The sessions were well attended and the audience actively engaged in lively discussion of the topics presented. Dr. Nancy Dickey, the president of the American Medical Association, attended both days, and served as a presenter and panel member. The Difficulty of Caring Under the Pressure of Change was the title of the Saturday forum. On Sunday a Panel of Experts presented Perspectives on Complimentary Care, after a superb Historical View of Complimentary Medicine by Dr. SY Tan introduced the session.

Saturday – October 4

The morning session was opened by Dr. Nancy Dickey, who spoke on the ethical conflicts which may be engendered by the Managed Care model. Representatives of the Medical Community (Peter Locatelli, MD) and the State of Hawaii (Moya Gray) discussed patient privacy issues. Dr. Dickey commented on Unionization of Physicians, noting that the ethical commitment's of Unions, are at odds with the ethical commitments of physicians. She reiterated the AMA position, which does not support unionization for physicians. She indicated an congressional bill will be introduced to enable physician collective bargaining, which is supported by the AMA.

Mr. David Karp, a loss prevention manager for MIEC opened the next session with a variety of practical solutions for physicians who may face litigation related to the practice of medicine. He reiterated that inadequate and poor medical record keeping is the primary cause for most lost cases in litigation or settlements. He indicated that MIEC will be bringing a seminar on good medical record keeping to Honolulu in the near future. He posed several questions and answers:

- Who owns the medical record? The medical record is owned by the physician practice (maybe a corporation or partnership)
- Who can access the record? The information in the record is legally available to patients.
- How to release records: With a written request (authorization) by the patient and only with a written request.
- What if Records are subpoenaed? Release the records, but always ask for a delay. It is seldom required to IMMEDIATELY release records.
- How much should be charged for medical records which are released? Twenty five cents per page is standard, but you should

consider not charging patients, in the interest of public relations. Sending records to other providers is usually not associated with a charge.

- How long am I required to maintain records? 7 Years for full records, longer for basic information.
- Tips for Electronic Medical Records: Back up records daily, print paper copies, assure confidentiality.
- E-Mail: This is an evolving area which is so unclear at this time that it is not advised as a practical or legally sound method for engaging in patient care. Guidelines can be found at www.amia.org.
- DICTATION is the best medical record method. All physicians are encouraged to dictate records, since they are clear and comprehensive. Warning-Read the dictations before signing, and do not use a "Dictated but not read" stamp on your documents.

David Willet, esq., General Counsel for MIEC, provided a review of the Federal Fraud and Abuse legal environment. His emphasis was on recognizing the fact that we are operating in a new legal environment, which poses new threats and demands new preventive strategies.

- In 1996 a new class of crime was created – "Federal Health Care Offense".
- Criminal penalties were stronger, and civil penalties of up to \$10,000 per line item on claims were introduced.
- Individual providers can be excluded from participating in Federal Health Care reimbursement programs.
- The FBI and Office of the Inspector General are allowed to retain funds generated through legal actions in the health care arena. Strong motivation for aggressive investigation!
- Private carriers must report false claims to the Federal Government. All false claims activities (private and governmental) place the provider at risk of non-participatory status in Federal programs.
- How do people get "caught": Sophisticated analysis of billing documents to identify patterns, whistleblowers, competitors, employees. All have incentives. Whistleblowers can recover 25% of funds collected from legal actions.
- Advice: Have a Quality Assurance program, stick to it, and review it frequently. Engage an experienced lawyer at the first sign of an investigation. Both the guilty and innocent are at risk in this new legal environment.

HAMPAC:

A brief interlude in the professional presentations allowed Representative Stan Koki to indicate his support for three issues; The

patients right to choose a physician, Expanded medical savings accounts, and meaningful medical tort reform. Dr. John McDonnell introduced Stan.

Dr. Stephanie Woolhandler:

Dr. Woolhandler was the highlight of the morning. Her provocative and well documented review of the negative impact of the managed care model on quality of care, physician effectiveness, and the economic environment was the focal point for much discussion. Her support for a national health care system launched an engaging debate with Dr. Nancy Dickey, president of the AMA. Dr. Woolhandler reviewed the history of physician Gag Clauses" in physician contracts, and the process by which the "court of public opinion" has virtually eliminated these barriers to physician-patient communication. She concluded with the message that both physicians and patients must be the motor for health care reform. She defined a new class of disadvantaged patients, those with illness. This class of patient finds it difficult to be insured, and difficult to access services when insured. A chilling litany of managed care principles were used to demonstrate the need for a national health care system. Under the Milliman and Robertson guidelines for health care utilization used by some managed care organizations bilateral cataract surgery is approved for only those patients who are young, and require vision for work related activities, another example was the guideline that a neurologist evaluation is not medically necessary for a seizure patient. These examples were served to reinforce the message that Dr. Woolhandler delivered; Managed Care is not a model that works for patients or physicians, and another system must be developed. Data was presented which supported the contention that health status is decreasing for Americans in the current managed health care environment. The control of blood pressure appears to be decreasing, and there is systematic shifting of patients from managed care systems to Medicare based services when illness develops. Such data indicates to Dr. Woolhandler that patients have become pariahs with this approach to health care delivery. She advocated a shift to the Canadian model of health care and presented data regarding reasonable wait times for services such as CABG in that system. Data regarding cost saving in Canada revealed that the majority of economization results from decreased administrative costs, not diminished direct health care services. This was contrasted with the dramatic increase in administrative costs evident in the US Managed Care systems. A striking display of the increasing number of medical administrators versus the minimal growth in health care providers supported her contention that control of costs can be accomplished through control of administrative expenditures, rather than curtailment of services. In conclusion Dr. Woolhandler quoted from the poet laureate of Kentucky "Rats and roaches live under the laws of supply and demand. It is the privilege of human beings to live under the laws of justice and mercy."

Dr. Nancy Dickey:

Dr. Dickey provided a vigorous rebuttal to Dr. Woolhandler's proposal for nationalized health insurance. She indicated that in Canada 35% of health care delivery is provided outside of the National Health Care system, because of dissatisfaction and inefficiency. She proposed that immense bureaucratic barriers to care would develop in a similar American National Health Care system.

Hawaii's Legislature:

Senators Randy Iwase (D) and Sam Slom(R) A brief presentation by each senator regarding health care initiatives in the legislature was enjoyed by the audience. Senator Slom highlighted his three imperatives that would most impact on health care; 1) Ethics in government initiatives, 2) Improvement of the small business environment, and 3) Allowing organized medicine latitude to reorganized, based upon debate and solutions developed by the Medical community. Senator Iwase reviewed his perspectives on health care and the role of the legislature.

Sunday – October 5

The morning session focused on Complimentary Care. An introduction by Dr. S.Y. Tan was followed by a Panel discussion with interactive audience participation. There was a remarkably "full house" for this last morning of activities, with enthusiastic and informed engagement of the membership in attendance.

The panel members was comprised of the following members:

N. Emmett Aluli, MD, Physician
Alfred J. Fortin, PhD, Insurance Executive
Nancy W. Dickey, MD, President of the AMA
Robert G. Klein, Esq., Associate Justice of the Hawaii Supreme Court
S.Y. Tan, MD JD, Medical Ethicist
Kanalau G. Terry Young, PhD, Consumer, Wheelchair user.

The Introduction by Dr. Tan provided an Historical review, focused on the "heretic" fringe that was responsible for the evolution for modern medicine. His them reflected the absolute distrust and ostracism of many great men of medicine, in their own times. His examples included Vesalius, and Semmelweis. He insinuated that unless we remain open to new ideas we will reject and suppress many medical advances of great potential. He attempted to distinguish "Quackery" from alternative or complimentary approaches to medicine using the following criteria which characterize "Quackery":

- 1) A quick cure is promised
- 2) Testimonial evidence is presented
- 3) A "secret" formula or treatment is described
- 4) Traditional medicine is attacked in the promotion of the new "cure"
- 5) The FDA is the subject of persecution in the promotional material
- 6) Common targets for such cures are processes which are nearly universal (prostate disease, headaches, etc.), or those for which effective therapy is not available.

The panel discussion followed with excerpts form each panelist presented below:

Fortin: HMSA has no formal policies regarding complimentary medicine, and would apply evidence based standards to any policy developed. Protection for patients, economic realities, and integration of political issues, liability, and consumer demand will be factors that guide any future policy development.

Dickey: The AMA supports the challenge that faces alternative/complimentary medicine practitioners to subject the methods to outcomes based research, and to practice based upon the evidence developed in research.

Tan: Attempted to define Complimentary medicine and concluded that "unstudied" methods of traditional and cultural medicine may best fit this category. He advocated application of evidence based research techniques in this area. He suggested it may be futile to try and categorize complimentary medicine, and suggested that alternatively we ask four questions regarding any therapy.

1. Is it effective? Proof should be demanded
2. Is it safe?
3. How much does it cost? Consideration of factors such as possible fraud should be considered.
4. Does it usurp effective methods?

Aluli: Dr. Aluli described a variety of traditional Hawaiian healing and treatment methods, stressing community and family based therapies. He described his practice on Molokai'i. He described a process of evaluation over the next five years aimed at consideration of state licensing for traditional practitioners. He integrates traditional methods (massage, herbal remedies, and community based therapy) into his practice regularly, and advocates for more widespread acceptance and application based upon his knowledge and experience. A variety of outcome data has been collected and presented from his population of patients on Molokai'i. Dr. Aluli expanded upon the linkage of traditional Hawaiian Healing methods, poor Hawaiian health status, and social disruption related to issues of land ownership and Hawaiian sovereignty. Hawaiian health is inextricably bound to the land ('aina) and will remain a challenge until the linkage is recognized and rectified, in Dr. Aluli's opinion. Dr. Aluli advocated applying scientific study methods to traditional Hawaiian Healing, but expressed concern that doing so would possibly impact on effectiveness, and would take Hawaiian physicians out of the process. He suggested a core of Hawaiian physicians may be best suited to the task of studying Hawaiian Healing methods. He agreed with a audience members observation that the application of scientific study to spiritual healing may in fact destroy or negate the potential for demonstrable benefit of these methods by scientific study.

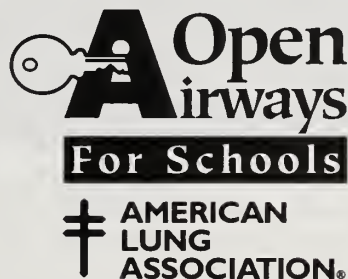
Young: Dr. Young described his experience as a traumatic quadriplegic, who teaches Hawaiian Studies at the University of Hawaii. He described his struggle with asthma, and a personal approach to a proposed complimentary medicine product. He has been advised that blue-green algae will improve his condition. He plans to seek the advice of his physician and then balance the information available in his consideration of this product for his personal use.

Klein: The supreme court justice provided some overview of how the court functions and how principles of justice are applied to medical litigation. He reflected upon the very small proportion of cases in the supreme court which are medical cases.

Summary

The meeting was well attended, and there was lively interaction between the audience and the panelists and speakers. I was very impressed with the excellent organization and program developed by Dr. Shirasu and the meeting and program committees. The current state of affairs at the AMA, and in our state of Hawaii was presented by members of the community, the legislature, the judiciary, and organized medicine. Debate and controversy were informed and enlightened the audience and some speakers.

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Scenes from the 1998 HMA Meeting

Kauai Marriot, October '98

Row 1.—(left to right) Leonard Howard, MD looks happy that his term as HMA President is over. Kevin Hara, MD and son Ryan share “family time” at the HMA meeting. The exhibitors were especially creative in booth design and giveaways.

Row 2.—Speaker of the House of Delegates- Herbert K. W. Chinn, MD. Vice-speaker of the House, Peter Kim, MD. Dr. Walter Young visiting the exhibits. Dr. Arleen Meyers was honored as the 1998 Physician of the Year for her outstanding community service.

Row 3.—HMA staffers keep smiling: Jennie Asato, Jon Won, & Nelson Jones. The mini-carnival featured tie-dyeing hats: Teacher Noreen Yamamoto with Len Howard's grandchildren. Welcome 1999 President Patricia Chinn, MD, general surgeon, Honolulu.

Row 4.—Diane Holschuh (Mrs. Fred) and others at jewelry-making class. Drs. Robin Yim and Stuart Pang and their children having a good time!



Row 1.--(left to right) The UH Medical Student contingency was the largest ever! The food was ono!

Row 2.--Yes, that person on the left is really Pat Chinn incognito with Len Howard dancing, totally surprised by his "friends". Kalapaki Bay was the setting for the carnival organized by Kauai Girl Scouts: Dr. D. Duvachelle and his children enjoy the afternoon. Who says doctors don't dance?

Row 3.--The Blond Boys played "Love Potion #9" while dancers Cal Wong, Paul DeMare, Susan Wong and Gerald McKenna roasted the outgoing prez. Controversy promotes long lines at the mic in the House of Delegates. Drs. Stan Saiki, Phil Hellreich, Walter Young, Fred Holschuh and AMPAC visitor Bob Hertzka.

Row 4.-- At the end of the House, new leadership is sworn in: Dr. Len Howard gives the oath of office. (l to r) Al Arensdorf (Maui councillor), James Lumeng (president elect), Phil Hellreich (Secretary), Myron Shirasu, Walter Young and Cynthia Goto (Honolulu Councillors), and Fred Holschuh (Alternate AMA Delegate). AMA President Nancy Dicky, MD gives oath of office the incoming president Patricia Chinn, MD with Herbert Y. H. Chinn, MD (Pat's father) holding the bible.

WHEN MEDICINE CAN NO LONGER OFFER HOPE...

FOR A DOCTOR TRAINED TO SAVE LIVES, LOSING A PATIENT IS OFTEN AN EMOTIONAL DEFEAT. IT IS AT THIS POINT, WHEN MEDICINE CAN OFFER NO FURTHER HOPE FOR THE FAMILY, THAT THE PHYSICIAN CAN OPEN A DOOR OF OPPORTUNITY FOR THE SURVIVING FAMILY. THE "CONTINUUM OF CARE" HAS PROGRESSED FROM PATIENT TO FAMILY, AND THE DOCTOR HAS AN IMPORTANT ROLE TO PLAY. AFTER DECLARING DEATH, THE PHYSICIAN CAN OFFER THE SURVIVING FAMILY THE OPTION OF DONATING THEIR LOVED ONE'S ORGANS AND TISSUES SO THAT OTHERS CAN LIVE HEALTHIER AND LONGER LIVES. STUDIES SHOW THAT DONATING OFTEN PROVIDES COMFORT AND CAN FACILITATE THE HEALING PROCESS FOR DONOR FAMILIES. FIND OUT HOW TO BROACH THIS SENSITIVE SUBJECT BY CALLING THE ORGAN DONOR CENTER OF HAWAII AT (800) 695-6554.



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Life in These parts

Dream Chaser: For the past decade, Honolulu psychiatrist Robert Marvit, 60, has been trying to ease his way out of his medical practice into a total life as a jazz musician. He has succeeded to a certain degree... On Mondays, he is a full time sax player, devotes the day to the sax and has a regular afternoon gig at the Waikiki Community Center. Bob had worked his way thru college and medical school as a musician --- playing everything from bar mitzvahs to sweet 16 parties...

Hawaii Coalition for Health: (A nonprofit advocacy organization for patients) Public fee \$5/yr for Hawaii residents; \$150 for physicians and \$25 for nurses and health professionals. Coalition president: Arleen Jouson-Meyers -- pediatrician and U of Hawaii law student. Consultant: retired law professor Richard Miller. Date of incorporation: Dec '96.

Richard Miller became interested when a proposed HMSA participating physician's agreement "was as close to an agreement for slavery as any I've seen with virtually no rights for the physician. HMSA could virtually terminate physicians at will." Subsequently HMSA made some significant changes in negotiations with the Coalition, HMA and the Hawaii Federation of Physicians & Dentists, but with only a two-year agreement.

Miller felt that only by getting some legislation can the Coalition deal effectively with the problem. This led to the discovery that HMSA is a mutual benefit society that isn't subject to the insurance commissioner's scrutiny except for solvency. The new patient rights bill remedied that... through the political forces of the Coalition and the American Association for Retired Persons (AARP).

The coalition was formed with three directors and 38 consultants and now has 950 members. It maintains a hotline -- 622-2655. The coalition and AARP provided information on the patient rights bill and help people through the appeals process. The coalition also started a monthly one page publication called "Health Tip" with 8,000 copies distributed by Longs Drugs and Costco. (From Helen Altonn's feature in the Honolulu Star Bulletin Oct 16 '98)

In Remembrance: Internist Thomas Min, 81, who practiced 50 years until the last 2 months of his life died September 24. Thomas was private physician to the late Dr. Syngman Rhee, former president of the Republic of Korea.

Appointed, Elected, & Honored

HMA Officers for 1999: President: Patricia Chinn; Immediate Past Precedent: Len Howard; Secretary: Phillip Hellreich; Treasurer: Charles Kelley. AMA Delegate: Allan Kunimoto; Alternate Delegate: Stephen Wallach.

HMA Physician of the Year: This year's award recipient was Arleen Jouxson-Meyers who finished her law degree at the U of Hawaii while practicing pediatrics in Wahiawa. She formed the Hawaii Coalition for Health, which focuses on advocacy for patients. The Coalition addressed such issues as insurance contracts and patient's rights -- a bill which was passed by the State Legislature.

Rush Award: Pediatrician Calvin Sia was the 1998 Benjamin Rush Award recipient at the AMA interim Meeting held on December 6 in Honolulu. The prestigious award is given for outstanding contribution to the community for citizenship and public service as a practicing physician. George Mills was the first from Hawaii to be so honored. **Soroptimists International of Waikiki:** Elected S. Kalani Brady as its 1998-99 president.

Francis Wong Dedication Ceremony: On September 25, a special dedication program was held at Wong Stadium in Hilo to unveil a bronze plaque memorializing Francis Wong MD, Hilo physician who was a sports leader on the Big Island...

Women of Distinction Award: The Waikiki Soroptimists awarded Patricia Blanchette for her role as founder of the Geriatrics Medicine program at the U of Hawaii and her staff positions in medical centers on Oahu.

State Ethics Post: OB-Gynman Carl Morton is one of two candidates to fill the post.

Rehab Hospital Board: Endocrinologist Laurie Tom was appointed to the board by chairman Michael W. Perry.

Physician Moves

Oct: Surgeon Hiroji Noguchi joined the Surgical Associates Inc. (i.e. Livingston Wong; Fong-Lieng Fan; Whitney Limm; Alan Cheung; and Linda Wong) as an associate in the practice of general surgery, vascular surgery and transplantation.

Pediatrician Mathew Ho joined the Maui Medical Group Inc.; pediatrician Doreen Ueoka joined the Ohana Physicians group clinics in Wailuku and Pukalani Square; and Pediatrician Ric Custodio joined the Bay Clinic Inc. Family Health Centers as medical director.

Tina P. Chun MD opened her now OB-Gyn practice at Queens Med Center POB I. FP Kim Chi Nguyen joined the team of Helen Percy and Carcel Gilbert at the Lahaina Clinic of the Maui Medical Group.

Board eligible orthoped Darren Egami joined the Maui Medical Group in Wailuku. Darren was chief resident in orthopedics at Queens Medical Center and the U of Hawaii Orthopedic Trauma Service and recognized for his excellent performance.

Internist Thu H. Vu joined the Kilauea Medical Associates on the Big Island. FP Ernest Bade and FNP Jackie Gardner relocated to Waiakea Villas, 400 Hualani St. Ste. 191B, Hilo, Hawaii.

General and vascular surgeon Leonard Kiehm who practiced 21 years in Kailua, Oahu moved to the Maui Clinic Medical Center.

Miscellany

George looked like a golf pro in his designer outfit, but he sliced his first drive deep into the woods. Rather than accept a penalty, he decided to try an iron to get back on the fairway. But his ball ricocheted off a tree and struck him on the forehead, killing him. When he arrived at the Pearly Gates, St. Peter greeted him. "Oh, you look like a golfer. Are you any good?" George replied, "I got here in two, didn't I?"

Smith goes to see his supervisor in the front office. "Boss," he says, "we're doing some heavy house cleaning at home tomorrow and my wife needs me to help with the attic and the garage moving and hauling stuff."

"We're short handed, Smith," the boss replies, "I can't give you the day off."

"Thanks, boss," says Smith. "I knew I could count on you."

An attorney was on his death bed in the hospital. A friend came to visit and found the lawyer frantically leafing through the bible. "What are you doing?" The visitor asked.

The sick lawyer replied, "Looking for loopholes."

Hors De Combat

Herbal Treatments: Drs. Marcia Angell and Jerome Kassirer of the New England Medical Journal, in an editorial, cited the hazards of poorly tested herbal remedies and recommended that alternative medicines should be subjected to the same rigorous standards as mainstream treatments.

Herbal remedies sold as dietary supplements have proliferated since 1994 when Congress exempted them from regulation by the Federal Food & Drug Administration.

"There cannot be two kinds of medicine; conventional and alternative. There is only medicine that has been adequately tested and medicine that has not... Medicine that works and medicine that may or may not."

"Alternative treatments should be subjected to scientific testing no less vigorous than that required for conventional treatments."

Potpourri I

For more than an hour, a scrawny guy sat at a bar staring into his glass. Suddenly a burly truck driver sat down next to him, grabbed the guy's drink and gulped it down. The poor little fellow burst out crying, "Oh, come on pal," the trucker said. "I was just joking. Here, I'll buy you another."

"No, that's not it," the man blurred. "This has been the worst day of my life. I was late for work and got fired. When I left the office, I found that my car had been stolen, so I walked six miles home. Then I found my wife with another man, so I grabbed my wallet and came here. And just when I was about to end it all, the guy said sobbing, "you showed up and drank my poison."

Steve was unemployed and desperate for money. He decided to go to the richest neighborhood in town and look for work. One

homeowner offered him a job painting the porch. The man told Steve the paint and brushes were in the garage.

An hour later Steve rang the doorbell to collect his pay. "Thank you sir," Steve said as the homeowner handed him the money. "Oh, by the way," Steve added, "you don't have a Porsche -- it's a Ferrari."

Conference Notes:

Lipids: Are The NECP Guidelines Still Correct? / *Synopsis of Roger Illingsworth's lecture at Acqua Restaurant Dec 3 1998 (Merck sponsorship)*

Introduction: Two decades of studies have delineated the role of lipoproteins in the pathogenesis of atherosclerosis... viz high LDL; and High Lp(a), high VLDL and reduced HDL levels... NCEP Guidelines in 1988 and revised in 1994...

NCEP II:

A. Diet Therapy:

- Less than 2 risk factors: Keep LDL below 160
- More than 2 risk factors: Keep LDL below 130
- With CHD or PVD: Keep LDL below 100.

B. Drug Rx

- Less than 2 risk factors: Keep LDL below 190
- More than 2 risk factors: Keep LDL below 160
- With CHD and PVD: Keep LDL below 130

NCEP II Guidelines: More aggressive than European and British guidelines.

4 S Trial (Simvastatin Study) Population including men and women/even with LDL levels of 210 and 310: LDL reduction 35%; benefit even in LDL 115-169 levels.

Care Trial: Population with mean LDL of 139: Pravastatin reduced LDL 28%; and reduced MI and fatal CHD 24%.

Subgroup analysis:

Pt group with LDL greater than 150: 35% reduction of events

Pt group with LDL 125 - 150: 26% reduction of events

Pt group with LDL 115 - 125: No reduction of events

Interpretation: Drug therapy of CHD pts with LDL below 125 not worthwhile; NCEP target goal of LDL less than 100mg inappropriate.

"I do not endorse this viewpoint...the recent publication of the post CABG study reveals "significantly less atherosclerosis in vein grafts of pts with LDL lowered to 95mg compared to pts with LDL 135.. Hence NCEP II target value of LDL below 100 in pts with atherosclerosis is proper. Rather than changing NCEP guidelines for/pts with known CHD, efforts should be directed at increasing the number of pts on drug therapy by including more risk factors in future recommendations viz Lp(a), ACE genotype, fibrinogen, homocystine and platelet function abnormalities..."

How to cope with the Disagreeable

per VP Roger Illingsworth MD PhD from Division of Endocrinology, Oregon Health Sciences University

"If you disagree with my medical recommendations to treat _____ with _____, please sign this letter and return a copy to me indicating that you are making medical decisions in this case and that your decision is against my medical recommendations and that you therefore will accept responsibility for any adverse outcome."

Potpourri II

"I woke up this morning feeling so bad," one fellow told another, "that I tried to kill myself by taking a thousand aspirins."

"Oh really? What happened?"

"After the first two," he said, "I felt better."

"I read in the morning paper that there may be future cutbacks in our retirement benefits," the man told his wife, "so I stopped by the Social Security Office down town to check my records. They had misplaced my file, but I convinced them I was over 62 by showing them all the white hairs on my chest."

"If you had only dropped your pants," his wife shot back, "you could have qualified for disability."

Seeking to determine his publisher's opinion of the manuscript for "Les Miserables," Victor Hugo sent him a note containing only: "?" He received the reply: "!"

Conference Notes...

"EVISTA (Raloxifene) for Postmenopausal Osteoporosis"

Mechanism of Action (SERM): Selective Estrogen Receptor Modulator Comparison Raloxifene with Tamoxifen:
Tamoxifen:

- a. Estrogen agonist on bone
- b. Estrogen antagonist on breast
- c. Partial estrogen agonist on uterus.

Raloxifene:

- a. Estrogen agonist on bone
- b. Estrogen antagonist on breast and uterus
- c. Also being tried for breast Ca.

Adverse Effects of Raloxifene:

- a. hot flashes
- b. leg cramps
- c. risk of thromboembolism

Advantages of Raloxifene:

- a. No uterine bleeding
- b. No breast pain
- c. Less risk for breast Ca
- d. Bone: Less fractures; less osteoporosis (spine and hip)
- e. Less breast and endometrial Ca

*William Dere MD, Lecturer
Roy's 8-17-98*

I'll Just Check the Sample Cupboard

(Condensed version of medical humor from STITCHES Sep '98)

by Dr. J. P. Caldwell

One of the great advantages of being a family doctor is that you always have a large supply of free drug samples to give away to your patients and friends even though they're often not exactly the drug of choice for the particular problem... Only on very rare occasions do I prescribe for myself - only in emergencies - but I had this really ugly toenail that I just had to treat. My wife has this habit of stomping on my foot with her high heels at dinner parties, and my poor battered toenail was rising up like a creature from the Green Lagoon in my Hush Puppies.

I don't have a lot of time to wait in line at the drugstore like patients do and I knew we had these samples in our drug cupboard, so I took two or three of them a day. They were in a little pill bottle with a bright blue happy face on it.

Within two days my yellow toenail fell off!. Unfortunately, so did my toe. In addition, the rest of me turned yellow - oddly enough, the exact same color as the old toenail!.

My internist says he'd love to know the name of the pills I was taking, the ones with the bright blue happy face on the bottle. We've been over it 100 times - I tell him everytime that they're white and then I describe them to him using the back of my little fingernail and my thumb to show the exact size - but he never recognizes them. He doesn't see drug reps.

Though I did react to the pills, after three months my disability plan clicked in like a charm and I did get to meet a lot of nice young doctors, some of them whom are very kind and caring, though they're a little short on experience, especially with drugs. I particularly appreciate the surgeon who's the head of my liver transplant team.

He's very caring and compassionate and treats me more like a friend or colleague than a patient. He was once a GP himself, so he knows that I don't have a drug plan and whenever I need any medicines - say one of those anti-rejection pills - he just excuses himself for a moment to see if he has a "little something" for me in his drug cupboard.

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Potpourri III

Overkill

A pleasant, well dressed woman came in for her annual physical examination. She 'd recently experienced some vaginal irritation which she attributed to a mild infection. When asked if she'd used anything to treat the problem, she admitted she had: "Pinesol." I couldn't quite hide my surprise and she became a bit defensive, telling me that after all, "It is a disinfectant!"

"Yes," I replied, "but for floors!"

We obtained vaginal cultures and when the culture report came back, it read, "Organism resembling vaginal flora."

The poor things -- they were mere shadows of their former selves.

Dr. Linda Lambert, Calgary



Of all eloquence, a nickname is the most concise.

The recent AAO meeting in New Orleans featured a new perspective for professional definition. The intent is to enroll all eye surgeons in the concept of "EYE M.D." Tired of being confused with other practitioners, and saddled with a clumsy specialty name, the Academy has embarked upon an approach to educate the public (not to mention insurers and the government), as to the real doctor for eye care. With the notation of EYE-M.D. on stationery, statements, yellow pages, business cards, door facings, alongside logos, and so forth, the Academy expects that the confusion regarding terms will disappear. This is a commendable Academy effort, and might well have come along ten or more years ago. Welcome to the EYE M.D. club.

They are called wonder drugs, because you wonder if they work.

Despite a federal ban on the drug, five states - Alaska, Arizona, Nevada, Oregon and Washington - have approved medical use of marijuana. The DEA has warned that physicians who prescribe marijuana for medical use will lose their prescription authority, and be excluded from Medicare and Medicaid. On this issue, the Republican Congress and the administration agree. However, proponents say doctors will not be prosecuted if they simply recommend pot, but do not prescribe or procure it. Under the law, the physician would write a recommendation in the patient's record, and the patient can then request a copy to protect against prosecution. Despite scant evidence about medical efficacy of pot, the various medical societies have been silent, and only the Nevada society opposed the issue. With legislative momentum gaining for medical cannabis, once can see where the domino effect will soon put this unregulated, undefined, unpurified, and under-researched drug into widespread use. To believe that it will be limited to medical indications, is hopelessly naive.

The first myth of management is that it exists.

MedPartners, Inc. the nation's largest physician practice management (PPM) company, is getting out of medical practice, and will concentrate on its pharmaceutical service business. In the strongest sign yet of the gloom around PPMs, MedPartners will shed 228 clinics and more than 10,000 affiliated doctors in the next 12 months. Meanwhile in California, FPA Medical Management filed for bankruptcy in July. The San Diego based practice management company left unpaid millions of dollars in claims for its doctors' services. FPA is not the only company that took a downhill slide after gobbling up physician practices; Allegheny Health, Education and Research Foundation in Pittsburgh also filed for bankruptcy. Earlier this year, PhyCor, MedPartners and FPA revealed losses, and difficulty integrating some of the physician practices into their organizations. Doctors chafed at working for outsiders and in some cases were alarmed by steep drops in personal income. Some groups have tried to break their contracts. As the old saying goes, there ain't no free lunch.

It takes a lot of suits to keep a lawyer well dressed.

The American Academy of Ophthalmology has filed a lawsuit against the Health Care Financing Administration over practice-expense calculations. The HCFA formula clearly conflicts with the intentions of Congress dictated by the 1997 Balanced Budget Act. If the Academy is supported by the court, the stake for ophthalmology amounts to nearly \$200 million. The complaint asks the court to limit the transfer to \$390 million as Congress intended, and stop this unlawful regulation which would provide underpayment for thousands of services. Ten other medical specialty societies have joined in the lawsuit. But is it wise to sue people who buy paper by the truckload and ink by the barrel?

The main accomplishment of unions is to annoy people who are not in them. A bill has been offered by Rep. Tom Campbell, Republican from California, called Quality Health Care coalition Act of 1998 which would allow physicians to negotiate collectively with managed-

care plans. Federal Trade Commission boss Robert Pitofsky testified against the bill before the House Judiciary Committee, stating that exempting doctors from antitrust laws could harm consumers by raising prices and forcing many to go without health coverage. According to Pitofsky doctors can use "collaborative efforts to offer lower-cost alternatives and assure quality." Yeah, right!

Is there anything so assured, resolved, and distainful as a managed care organization?

A mother brought her 15 year old daughter to the HMOs clinic three times over the course of a summer for chronic stomach pain, back pain and vomiting. Initial blood analyses showed several abnormalities, including a high level of toxins indicating kidney problems. On physician listed lupus as a possible diagnosis, but no confirmatory tests were ordered, no referral was made to a nephrologist, and there was no appropriate follow up. Two weeks later, the girl coughed up blood and was rushed for admission to the hospital where lupus was diagnosed. Shortly after that she went into acute kidney failure and expired. A malpractice suit resulted. The parents' lawyers presented the case as a classic HMO horror story and claimed the doctors failed in their care due to pressures to avoid tests aim referrals unless absolutely necessary. Because the ERISA law protects insurers from liability for medical decisions, the HMO was dropped as a defendant, leaving the doctors to provide the deep pockets. An obviously enraged jury awarded the plaintiff ~4 million dollars, twice the amount the lawyers were asking.'

Life is a magazine where the wrong turn is just ahead.

The human body is bilaterally symmetrical. This anatomic reality has produced many reports of operations or procedures performed on the body part opposite to the offending tissue. A few cases become media fodder, such as the Florida surgeon who removed the wrong leg or the neurosurgeon in a prestigious New York cancer center who operated on the wrong side of a patient's brain. The few cases that hit the papers are only a hint of the nearly 1,000 cases of malpractice claims for wrong breast, lung or eye surgery which have been quietly settled. The exact number of such events are not known, but data shows that one in four orthopedic surgeons will operate on the wrong site at some time in their careers. No numbers have been collected for operations on wrong eye muscles, cataract extractions, or glaucoma procedures.

Things go wrong all at once, but things go right very gradually.


The 105th Congress adjourned having failed in some areas, but did handle some issues to medicine's benefit. Full funding for claims processing was provided by Congress, as was increases for NIH and CDC. Clinton's plan for "user fees" for health care providers was defeated (in Hawaii we already pay 40/o), as was the proposed expansion of Centers of Excellence demonstrations. Also shelved was a plan to expand the DEA into prescribing practices of physicians.

We are from the government. We are here to help you.

Would you believe that popcorn needs federal protection? The U.S. Dept. of Agriculture recently noted the appointment of a new member to the Popcorn Board. Other Washington foolishness we all pay for within the USDA, are the Mushroom Council, the National Pork Board, the Beef Promotion and Research Board, the Potato Promotion Board, the National Dairy Board and the American Egg Board. Nearly \$11 million in taxpayer dollars are reserved for these programs. Granted that marketing and research are useful for these food products, but why should it be government sponsored?

Addenda

- ❖ The average American eats 21.4 lbs of snack food each year.
 - ❖ Buy old masters. They are a better investment than old mistresses.
 - ❖ Why isn't a douche a female duke?
- Aloha and keep the faith—rts ■



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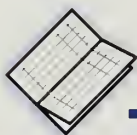
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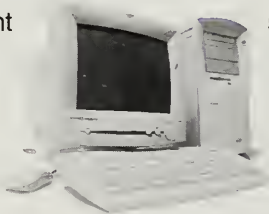


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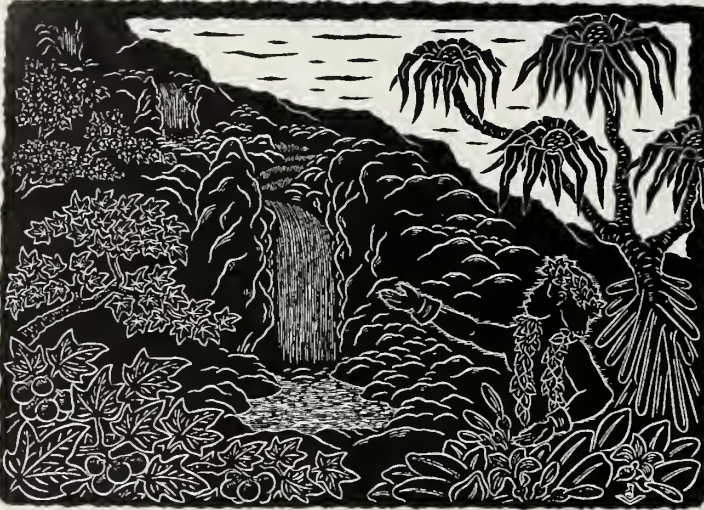
Ē Opihi Ē

Depicting the dangerous business of gathering the Hawaiian delicacy. The opihī is Hawaii's caviar and lives only in the most dangerous surf.



Norman Goldstein MD
Editor, Hawaii Medical Journal

"The Missing Lover"



"Kipahulu", title of the Cover Art for last September 1998, depicts a legend of two lovers in the Kipahulu district on Maui.

When I first looked at this very Hawaiian block print, typical of our covers by Dietrich Varez, I saw a possible lover to the left of the waterfall.

Then, when several of our readers also asked about the second lover, I was not sure of the location of the mysterious visage.

Recently, Varez has edified us by explaining there is a second lover -- but not visible. Only a voice was heard, so said the legend.

Mahalo, Dietrich, for perpetuating Hawaii mythology on the covers of our journal.

February is the Month for Lovers

An interesting article¹ by New York Times syndicated columnist, Jan Sheehan, says "Love is the Drug that Keeps Many Healthy". She reports on studies linking love; in another study, it was found that participants who reported being in love have high levels of euphoria-producing, pain-reducing endorphins (and no side effects from overdose - Ed.)

Our Poet Laureate, Dr. Robert Flowers' poetry and prose have appeared in the journal for many years, but his poems, "Mother of My Children", "More Beautiful", "Who Are You, Woman", and "Lovers and Friends" are most appropriate for February.

1. Sheehan, Jan. Love is the Drug that Keeps Many Healthy. Honolulu Star-Bulletin p.3 Feb 4, 1997.

This Month in the Journal

Janet Onopa MD of the Department of Medicine, University of Hawaii, presents an excellent review of CAM, complementary and alternative medicine in this issue. Because of patient interest in CAM, especially here in Hawaii, the Hawaii Medical Journal is planning a special issue dealing with "non-allopathic" medicine or CAM.

The Manuscript by medical residents, Sandi Kwee MD and Leilani Ka'anehe MD on "Occupational exposures and knowledge of universal precautions among medical students" emphasizes common exposures to blood among medical students and should be of interest to all physicians.

LOVERS AND FRIENDS

by Robert S. Flowers For my wife

*How gently
 How gently
 You walked upon the stage
 Of my presence
 And eclipsed the memories
 Of my past*

*How silently
 How silently
 Your soul whispered
 Into the ear
 Of my despair
 Sighs of hope
 Sounds of sustenance*

*How sweetly
 How sweetly
 You sang to me
 Songs of friendship
 And the suggestion
 Of something more
 Something yet
 To be defined*

*How softly
 How softly
 You touched my skin
 You touched my heart
 And you touched my life*

*How solemnly
 How solemnly
 We shared our sorrows
 Our aloneness
 And talked of tribulations*

*How reverently
 How reverently
 We shared our hymns
 We shared our faith
 And shared our prayers*

*How joyfully
 How joyfully
 We stood before our peers
 And stood before
 Our Lord
 And spoke our vows*

*How powerfully
 How powerfully
 You seized my future
 As I seized yours
 And built a home
 And bonded lives*

*How proudly
 How proudly
 You hosted my seed
 You swelled with pride
 And you bore our son*

*How dearly
 How dearly
 You held him close
 You nurtured his needs
 And gave him milk
 Of maturation*

*How intimately
 How intimately
 You brought the world
 To his shores
 And escorted him
 Down its ancient corridors*

*How tirelessly
 How tirelessly
 You followed
 My wanderings
 Weary and worn
 Forsaking composure*

*How wondrously
 How wondrously
 You conceived again
 And formed another life
 For us to love
 For us to share*

*How patiently
 How patiently
 You committed your time
 You shared your sleep
 And rationed your rest*

*How wisely
 How wisely
 You studied the art
 And mastered the task
 Of guiding precious
 And youthful lives*

*How selflessly
 How selflessly
 You gave yourself
 To become and be
 Not just one
 But the pivotal part
 Of a greater whole.*

*And
 How splendidly
 How splendidly
 You came upon my stage
 And moved beyond
 The beautiful lover
 That you are
 To give me what
 I most revere*

*Intimate
 And loving
 Friendship*



MOTHER OF MY CHILDREN

*Lithe and lovely
Boasting
Startlingly erect posture
For so tall a lady*

She was my lover

*Her breasts
Yet to be tasted
were positioned high and expectant
above a tiny waist
girdling a sensually lordotic spine
on a most perfect pelvic pedestal
whose backward tilt thrust the
lower abdomen forward to an apex
in gentle rotundae
proudly flanking
A most perfect umbilicus.
Athletically seasoned muscles
filled her gluteal fossae
and broadcast so alluring a contour
that competition could come only
from the juxtaposed legs
so long and so slender that
they seemed never to end.*

She was my lover

*Love, I gave to her
and she returned it
one hundred score over.
She was beautiful,
as was our shared love
And God blessed it
That glorious body
began to blossom and swell
bursting outwards with the New life
contained therein.
Her wee waist thickened
and her tantalizing breasts filled
with their destiny.
The body expanded with edematous fluids
and a store of adiposity sequestered
calories
Against that day when another's nutrition
Would prioritize gratification.*

*A son was born
who thrived on her eucharistic gift
of white Communion
Her body became his
And he became our joy
our fulfillment
Our hope for the future
our conduit to greater faith
A gift to us
he is yet our gift to Life.*

*With this tiny transient
she shared not only her body
she shared her sleep
her rest
her sinew
her time
her recreation
her figure
her health
her intimacy
her love life.*

*She shared her listening,
as Beethoven, Bach & Bruchner
and easy jazz, yielded
to infant theme songs
the rhythmic Hmpgrf-Hfmew, Hmpgrf-
Hfmew
of a breast feeding infant
a sigh, a cough, a bubble, a cry
These became her music.*

*She shared her composure
Circling tiny Soviet hotel rooms
through frightful nights
whispering "shushes" into an ear
screeching with pain
on an adventure
she was reluctant to take.*

*Throughout the years
since this son's conception
she shared her focus
Diverting most of her awareness
to another being.*

*She shared her leisure
yielding to a small child's
constant needs
Her discretionary moments
she gave to devouring books
on the care and rearing of children.*

*So much sharing
and to continue
She chose another
as did I
but my choice was easy.
Once again this lover of mine
gave, shared and sacrificed
all that she was and is
to create as ideal a beginning
as little ones can ever know.*

*And now, especially on this day
I say of this incredible woman*

*She was my lover
She is my lover*

*She has become
above all else,
Lover, Mother
The source and
Sustenance of life and
Health for these, my
beautiful children.*

And I love her more.....

This woman —

who was, and is my lover!

by Robert S. Flowers
written for Susan -Wife, lover, friend
mother, professional woman.



Continued on Page 25



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Special Commentary

Timeliness of Payments -- Our Lifeline

Malcolm R. Ing MD

Vice-Chair, Hawaii Medical Association Managed Care - Health Care Access Committee

I have just completed an informal survey of managed care contracts and other health insurance reimbursement patterns of payments with figures submitted by other physicians. I was enlightened to find that an unexplained 90+ day delay of payment ranged from 10% to 40% of all accounts of these physicians. (Some managed care plans have delayed all payments to physicians to 90 days or more!)

It is my opinion that no other profession has to put up with this type of insurance company payment abuse. The recent AMA "model managed care medical services agreement" states:

3.5 Promptness of Payment. Each payor shall remit to Medical Services Entity the Company Compensation within forty-five (45) days of its receipt of the submission of a Claim by Medical Services Entity sufficient in detail that Payor is able to reasonably determine the amount to be paid. If additional information is needed by Payor to evaluate or validate any Claim for payment by Medical Services Entity, Payor shall request any additional information in writing

within forty-five (45) days of receipt of the Claim. Payor shall affirm and pay any valid Claims within thirty (30) days of receipt of such additional information. "...In the event that a Payor fails to make such payment in a timely fashion as specified herein, Payor shall be obligated for payment of such amounts plus interest accruing at the annualized rate of the Wall Street Journal prime rate of interest on the first day of the month on which such amounts were due plus (3) percent.

According to the AMA bulletin, "This provision should prevent the practice engaged in by some companies of silently "sitting" on unprocessed claims or delaying payment on those the company has determined are not "clean" and waiting for the physician to notice and inquire regarding the status. In the event these unnecessary delays occur, the payor will be obligated to pay interest at three percent above prime on the claims that it should promptly paid."

It seems only fair that, if insurance companies expect physicians to accept drastically reduced rates of payment, so common these days, those same insurance entities should be required or encouraged to **pay in a timely manner**. There is a real possibility that, if the abuse continues to be accepted by the medical profession, the service may have to be curtailed jeopardizing the provision of medical care to our patients.

I strongly urge each physician of Hawaii to review his/her new medical insurance contract with the goal of having that insurance entity's contract contain the model AMA provision - the promptness of payment clause. It is time for medical insurance companies to take its collective foot off our lifelines!

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Medical School Hotline

Professionalism in Medical Education

Gwen S. Naguwa, MD

Associate Dean for Student Affairs

Associate Professor, Department of Pediatrics

Damon Sakai, MD

Assistant Professor, Department of Medicine

Office of Medical Education

Professionalism is usually defined as mastery of a body of knowledge. But as physicians, we are aware that professionalism in medicine extends far beyond the simple acquisition of clinical content. It encompasses a set of behavioral characteristics and values, which form the foundation for the sacred trust bestowed upon doctors by their patients. Much has been written about the perceived deterioration of professionalism in physicians and both the Association of American Medical Colleges (AAMC) and the John A. Burns School of Medicine (JABSOM) have been developing programs to address this issue.

In the AAMC Reporter,¹ Dr. Jordan Cohen, President of the AAMC, recently reviewed the outcome of a colloquium sponsored by the AAMC this past summer, which attempted to define the attributes of a profession and explore what medical educators might do to cultivate the core values of professionalism in future practitioners. The participants were a diverse group of individuals, including historians, philosophers, social scientists, lawyers, deans, faculty, students, residents, and AAMC staff. They agreed that a profession is defined by its specialized body of knowledge, but added that it also has its own organized activities for continuous advancement, a responsibility to regulate itself, and an implied contract with society. Professions are also defined by a dedication to service above personal gain. The article describes the need for medical education to nurture professionalism. It also describes future initiatives to develop educational programs that will enhance professionalism in students. Dr. Cohen concludes by saying, "Medical educators, in my judgement, have no greater responsibility than to ensure that medicine remains, in truth, a profession. It has been. It should be. And it can be — but only if we play our part."

Drs. Gregory Makoul and Raymond Currey, in a special collection of articles on medical school courses in professional skills and perspectives in the January issue of *Academic Medicine*,² noted that, "Increasingly, U.S. society is holding medical schools accountable for the kinds of physicians they produce, not only in terms of the numbers and specialties but, more importantly, in terms of the kinds of professional relationships their physicians have with patients and the wider community." The series contained descriptions of several medical school curricula as evidence that the medical education community is working to re-integrate science with the healing. They envision "both Dr. Welby and the NIH combined into a single physician, one who will make us both well and whole." The formats differed dramatically, but topics common in these curricula included ethics (personal and professional), humanism, diversity, communication, the doctor-patient relationship, and societal responsibilities.

At the John A. Burns School of Medicine, there has been a growing concern among faculty that the considerable effort spent teaching students the science of medicine, is not duplicated in preparing them to practice the medical profession. In response to this concern and Dr. Cohen's challenge, planning has begun on the development and imple-

mentation of a longitudinal curriculum in professionalism. A longitudinal design is necessary because the development of professional habits and attitudes takes place over time and much of learning is experiential (or problem-based).

Borrowing heavily from materials in the American Board of Internal Medicine's Project Professionalism,³ six major elements of professionalism were identified: Altruism (keeping patient interests foremost); Accountability (to patients, to society to address the health needs of the public, to the profession to adhere to ethical precepts); Excellence (including a commitment to life-long learning); Duty (free acceptance of a commitment to service, regardless of ability to pay, playing an active role in professional organizations, and volunteering one's skills and expertise for the welfare of the community); Honor and Integrity; and Respect for Others. Using these elements as the curricular content, a process was begun to identify what was already being covered in educational programs, and how areas not currently addressed can be incorporated into the medical school curriculum.

Currently, for example, Respect for Others or humanism, and Duty is introduced in the first year orientation as a part of the enormously popular White Coat Program and Ceremony. The highlight of this event is the presentation of white coats ('cloaks of compassion') to each student by alumni in the presence of their friends and family, and the administration of the Hippocratic Oath. Students also participate in an in-depth discussion of the significance of the Oath, as well as a seminar in which they analyze several common scenarios and professional dilemmas they will likely face as students and physicians. Students also write a personal mission statement in which they identify personal and professional goals.

Within the curriculum itself, medical students are provided with lectures and seminars discussing common ethical topics such as confidentiality, informed consent, and truth-telling. Sessions on communication skills in areas such as delivering bad news, discussing advanced directives, and futile care also are conducted during the current academic year.

Another feature at JABSOM is the flexibility of our problem-based learning format, which makes it ideally suited to accommodate new issues in professionalism. Health care problems studied by students in this curriculum can be revised to include issues of professionalism. Examples of altruism, accountability, duty, and humanism can be inserted for students to research, learn from, and adopt. Rewriting cases to emphasize humanism in medicine would also be a positive step.

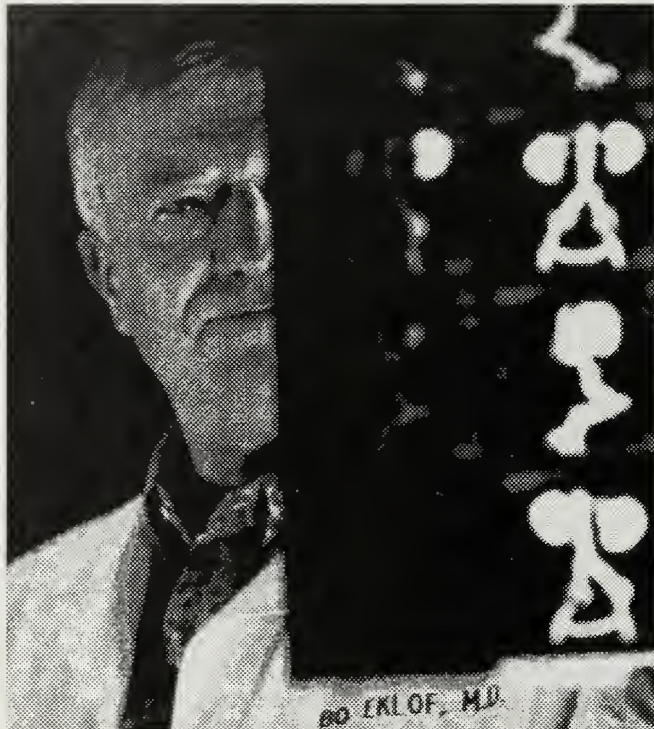
In addition, a formal professionalism curriculum for all University of Hawai'i Residency Programs, running in sequence or in parallel with that of the medical school, will help strengthen professional training of our students. Such programs will increase the likelihood that resident role-models, so important in the training of clerkship students, will continue to model and support professional behavior of the highest standard.

In summary, JABSOM, in response to observations of our own faculty as well as the AAMC and the general public, has begun to formally address the professional development of medical students in the art and practice of medicine in addition to the science. Fortunately, it is the same curriculum model, problem-based learning, which will serve as one of the primary methodologies by which issues will be presented. It is an obligation we as educators have to ensure that medicine retains the stature it has and should be afforded as a profession.

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*Kevin Matsukado, Rose Arpon, Michelle Fisher,
Mike Lau, and Clayton Takara*

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Complementary and Alternative Medicine (CAM): A Review for the Primary Care Physician

Janet Onopa MD

*It is difficult to find a satisfactory title for this review, because both the word "complementary" and "alternative" are not very politically correct currently. It is probable that there is no fully politically correct word, except for "non-allopathic," which is unfamiliar to many MDs. Accurately used, the term "allopathic" is as opposed to "homeopathic," so from its origins, "allopathic medicine" should include herbal medicine. However, in practice, herbal and many other non-homeopathic treatments are called "non-allopathic," whereas conventional medicine is called "allopathic." "Complementary" usually would include practices that are used **with** conventional western medical treatments, and "alternative" would include those practices that are used **instead** of western medical treatments. For most of this review, the terms "non-allopathic," "alternative," and "complementary" could be used interchangeably.*

This topic has gained interest, and received some allopathic legitimacy, in part because of an article that David Eisenberg, M.D., published in the New England Journal.¹ In 1990, he performed a telephone survey of about 1,500 adults in the U.S. and asked them about the use of treatments and practices that were "alternative," which he defined as not generally being taught in the U.S. medical schools and not being readily available in U.S. hospitals. From his sample, he extrapolated that in 1990, about 60 million Americans used alternative medical treatments, at an estimated cost of \$13.7 billion. There were more visits to alternative healers than to primary care MDs that year, and over two-thirds of people who did use alternative medical treatments did not tell their doctors about it.

Now that third party figures are becoming interested in paying for alternative medical practices (especially naturopathic, chiropractic, and acupuncture services), allopathic physicians will be increasing in the position of being able to refer people to alternative providers, and insurers will pay for services that MDs approve. Therefore, it will become increasingly important for physicians to have a degree of familiarity with alternative treatments (including efficacy and risks). So far, to date, there have been no cases of malpractice for giving advice about the use of alternative medical treatments, but liability will certainly exist to anyone who delivers

treatments, such as acupuncture or spinal manipulation, in the event of an adverse effect.

This review will briefly introduce some of the most common alternative practices likely to be seen in Hawaii communities: Homeopathy, Herbs, Naturopathy, Chinese Medicine and Acupuncture, and Chiropractic and spinal manipulation, and a brief discussion of Dr. Eisenberg's recent position paper on advising patients about alternative practices.

Homeopathy

Homeopathy was invented by Samuel Hahnemann, a physician who lived from the mid-1700s to the late 1800s. He was alarmed by the rather toxic nature of medical treatment of his day: it was common to treat by purging or bleeding, and it seemed to him that the doctors were often doing harm in their treatments. (This is a recurring theme among the founders of alternative methods.) He wanted to find some treatment method which was gentle, and which would cause no harm.

In the early 1800s, he revisited an old idea which Hippocrates had promoted, that of the "Law of Similars": *similia similibus curentur* (like cures like). The idea occurred to him after he took an overdose of quinine (cinchona bark) and became ill with it. He noticed that when he got sick, his symptoms were similar to those of malaria. At the time, physicians knew that quinine cured malaria, though they did not know the cause for malaria. Hahnemann surmised that perhaps it is because quinine **mimics** malaria that it is capable of **curing** malaria, if taken in lower doses. It is taking a "simillimum," a substance that can mimic the illness, which will cure the illness. Hahnemann thought that the similar drug would activate some vital force in the body to react against the illness.

He advanced his idea to his colleagues, and together they set about the task of "**proving**" drugs: identifying what symptoms they caused in high doses, in order to match them up with illnesses, after which they would be diluted down to non-toxic doses. Hahnemann chose "reliable observers" (including himself), who would take a large dose of a medicine, usually herbs and minerals that were used medicinally at the time, and note down what the symptomatic results were. They pooled several observers' findings and identified what each drug's signature symptoms were. This process is called "proving" a remedy.

They tried to identify the minimum dose of each drug that would be effective as a cure. To Hahnemann's surprise, he discovered that no matter how far he diluted the drugs, they still seemed to work as cures for illnesses. The explanation for this was that the method of

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dilution could be releasing some aspect of the original substance into the diluent (usually distilled water or alcohol solution). Hahnemann developed the dilutional method called **succussion**, wherein very precise dilution of the drug would be measured, and the container with the dilution would be pounded gently with a felt pad in a precise way, and then that solution would again be precisely diluted again, and pounded again. This method would activate the water or alcohol solution, which was being used as the diluent. If there was a substance that was not soluble in liquid, it could be ground up with milk sugar, (which was considered an inert substance) and that is called **trituration**. For every substance, the observers noted that the more dilute it became, the more potent it became. So in homeopathy, dilution is the equivalent of **potency**, and the act of dilution is called **potentization**, or **potentiation**. This is the opposite of what conventional medical doctors usually think of as "potency." In homeopathy, higher potencies are considered to be more powerful and able to stir up the body's "vital force." In classical homeopathy, patients can only get the extremely dilute (potent) medicines from a licensed practitioner and can't buy them over-the-counter.

Labeled homeopathic medicines denote potency by two methods. In Europe, they use the "decimal system" which is denoted by the symbol "x." 1x is diluted 1:10, and 2x is 1:100 (1x diluted with 9 parts diluent), etc. The "centesimal system" is denoted by the symbol "c" and is used more America. It starts with 1c= 1:100, and each successive dilution is 1 part to 99 parts diluent, so 2c is 1:10000, adding two zeros with each additional dilution.

Hahnemann and his colleagues thought through the mathematics, and realized that there is a point where the dilution is likely to become pure water, with a very high likelihood that there are no molecules of the original drug left in the solution. When this point is reached it is called **ultramolecular dosing**. This happens at 12c or 24x, where one can be almost 100% sure that there will be nothing of the original substance left in the homeopathic remedy. This became a source of controversy, and some people who practiced homeopathy thought that efficacy at ultramolecular doses defied logic, and chose to use only the lower potencies. Today, most homeopathic practitioners agree that high potencies do work better than low potencies, even at ultramolecular doses.

In classical homeopathy, it is considered ideal to use only one individualized, single simillimum in the treatment of an illness. Much of the "art of homeopathy" is that of choosing the correct simillimum. This is accomplished by means of a very careful history and exam, as well as incorporating knowledge of the type of person the patient is (body type and personality type). The practitioner then picks the one salient symptom of their illness to match with a simillimum. In classical homeopathy, a single individualized remedy is chosen, but in modern homeopathy treatments are often combined, especially in lower-potency OTC proprietary homeopathic remedies. There is some ongoing controversy within the homeopathic community about whether multiple remedies are effective or not.

Individualization is a hallmark of classical homeopathy, and this has been a problem when it has come to developing randomized trials. Many homeopathic practitioners will not accept trials without individualization as valid tests of the efficacy of what they do, since all their practice involves individualized remedies. The same criticism applies to the use of multiple remedies, which have commonly

been used in clinical trials. Hahnemann described one situation when individualization was not used and that was for epidemics. During a scarlet fever epidemic, he used belladonna as a *remedy epidemicus*, and gave it to all patients for both treatment and prophylaxis, reportedly very successfully.

In practice, homeopaths use two main types of references: a *materia medica*, or book that lists the symptoms that drugs can cause, and a *repertory*, or index of symptoms and what remedies might match. The selection of the potency to use is part of the "art" of homeopathy, but there are several principles involved. Treatments for mental symptoms are usually prepared using higher potencies than those for organic symptoms. Treatments for older patients are usually made with lower potencies, since older patients can't tolerate the stirring up of the vital forces produced by high potencies. Children usually are treated with higher potencies.

If patients are not improving with homeopathic remedies, practitioners will often review the remedy they chose. In particular, the higher potencies must be well selected and are only supposed to be effective if the right simillimum is used. So, if a practitioner finds his/her patient is not finding symptom relief, they will review the history again and perhaps start a new remedy. Also, in homeopathy, treatment will classically produce a "homeopathic aggravation" before the illness starts to improve. Practitioners have often supported patients through the aggravation period with placebo use and this is an accepted practice. Of interest, one aspect of homeopathy is that practitioners tend to campaign against fluoridation of municipal water supplies, with the belief that small doses of fluoride added to the city water can become naturally succussed as the water travels through the city's pipes. This would, in turn, lead to mass exposure to a potentially toxic potency of homeopathic fluoride. So, homeopathy enthusiasts may be active in anti-fluoride citizen's action groups in metropolitan areas.

In order to clarify what homeopathic remedies are, the following are examples of a few common remedies dispensed to patients:

- (1) *Allium* (onion): this is used for neuralgia pain, illnesses with weepy eyes.
- (2) *Apis* (ground up honeybees): this is used for stinging pain, blisters, and fever with dry skin.
- (3) *Arnica* (toxic flowering herb): used for shock, pain, bruising, and injuries (arnica is used topically in herbal medicine for injuries).
- (4) *Ipecac* (herb): this is used to prevent/treat vomiting.
- (5) *Belladonna* (herb): for illnesses that mimic anticholinergic symptoms, like flushing, hot fever, and dilated pupils.

Now that we have reviewed the underlying beliefs and practice of homeopathy, the question for conventional practitioners is clear: does homeopathy work? There is a body of clinical investigation on homeopathic remedies.

An excellent overview of homeopathic research is found in an article by three researchers from the Netherlands² and published in the *British Medical Journal* (BMJ) in 1991. Their conclusions led to a huge controversy, and the BMJ received more mail in response to this overview than they ever received from any prior article. It is a meta-analysis and overview of clinical trials of homeopathic treatment. The investigators reviewed 107 trials, but 2 of these were comparing one homeopathic treatment with other homeopathic treatments, leaving 105 trials that compared homeopathy with

placebo or standard medical treatment. Of these, 81 indicated positive results (homeopathy is likely to be effective), and 24 found no evidence of effect. Most trials had relatively poor quality methods but there were some that were that were well designed. The authors considered it likely that some publication bias existed. Publication bias can work in favor of, or against publication, depending upon the orientation of the editors. Alternative medical journals would theoretically be more likely to want to publish items that had positive results for alternative treatments, but conventional medical journals would be more likely to want to publish negative results. However, review of the outcomes does not reveal any correlation between the orientation of the journal (alternative vs. conventional) where an article was published and whether it demonstrated positive or negative results.

Of the best quality trials in homeopathy, 15 had positive results, and 7 did not. The authors of the BMJ overview indicated that there is some evidence that homeopathic treatment can be efficacious in the following illnesses: respiratory infections, hay fever, asthma, GI complaints (especially gastritis and irritable colon), arthritis pain, migraines, and recovery from sprains. Most trials were with poly-pharmacy (multiple combined remedies), and/or did not have individualized treatment, which has been a source of criticism by the many homeopathic practitioners.

Herbal remedies

This will be a brief review of some of the current oversight (or lack of it) on herbal medicines, some of the most commonly used herbs, and a review of a few herbs with documented toxicities. The U.S. law currently does not provide good oversight of herbal remedies and dietary supplements and there is some work being done to improve the regulation of these products. Other countries

have done a little bit better than the U.S. in crafting legislation. Currently, the U.S. is following the Dietary Supplement Health and Education Act of 1994. Senator Oren Hatch of the state of Utah (which has an active herbal products industry) introduced this law. It permits the marketing of "dietary supplement" with no required approval of any government agency, so long as there is a label on the product that states that (1) no Food and Drug Administration (FDA) evaluation of that product has occurred, and (2) the product "is not intended to diagnose, treat, or prevent any disease." When these criteria are met, the burden of proof about the product's safety, or lack of it, would rest entirely on the FDA, and not on the manufacturer of the herbal/dietary product. In practice, no one is actually taking responsibility for the safety of products, unless the FDA chooses to try to prove that a product is unsafe. The manufacturers can suggest doses on the label and these products are not standardized.

Other countries have better rules. For example, Germany gathered together a group of experts, called the German "Commission E," which was in effect from 1978 until 1994. This commission included toxicologists, pharmacologists, physicians, and other scientists and they produced 400 monographs on herbal medicines. They reviewed the available evidence, using a standard of "reasonable certainty of efficacy" and then produced guidelines for their use, dosing, and administration. The Commission E's monographs are available in English in the U.S., though more scientific evidence has been accumulating since they were published.

In contrast, in the U.S., in order to obtain FDA approval for a drug, a company would need to provide evidence and meet a standard of "absolute certainty of efficacy," and the average cost to achieve that standard is now about \$350 million per drug. Since none of these

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herbs or dietary supplements is capable of having a patent on them (a patent would make the investment worthwhile in future profits), no company would be willing to try to meet that FDA standard. So, unless the U.S. derives a separate category for herbs/dietary supplements or any non-patentable health products, to allow for a less-rigorous (and economically feasible) standard of efficacy, these things will never receive the funding for the research necessary to become FDA-approved. Hence, they will lack standardization, federal controls, or even testing to see if they are safe or effective. Many sources of information about herbs recommend that prior to using an herb, the patient should discuss its use with their physician, making it important for physicians to know about common herbs used and their safety and efficacy.

In general, Western herbalists will use medicinal herbs either singly, or mixed in combinations. In Asian cultures, it is very unusual to see a single herb prescribed; usually prescriptions are for herbal mixtures. There tends to be a common belief among herbalists that the "naturalness" of the product makes it balanced, and safe. Many patients will not take any purified extracts of herbs, with the belief that if a substance is purified, then it will take away its natural balance and it may destroy its positive attributes. The scientific studies on herbs are in general small in number, and most of them are not well done. Many of them are tested only on animals, or using very small numbers of patients, or are not randomized or controlled or blinded adequately, or are only *in vitro*, and many of them aren't available in English.

The following is a very brief review of some of the commonest herbal remedies and dietary supplements being used by patients today:

St. John's Wort, or Hypericum. This is a widely used herbal remedy for mild to moderate depression, and possibly for anxiety (there is a trial ongoing regarding its efficacy for anxiety). There are some well-designed small clinical studies on St. John's Wort, unlike many of the other herbal products used. A large long-term National Institute of Health (NIH) trial is ongoing. In the studies to date, it has demonstrated efficacy equivalent to imipramine in some.^{3,4} It's been safe in the studies to date, much safer than the tricyclic antidepressants, and with far fewer side effects. In the German commission E report monograph on St. John's Wort, it is described as having an monoamine oxidase (MAO) inhibitor-like mechanism of action, based on two older studies. Subsequently there has been more research produced about it and it has been shown to have only trace MAO inhibitor effects at clinically relevant doses. There is some recent evidence that it acts as a combined serotonin, epinephrine, and dopamine reuptake inhibitor.⁵ Because of the serotonin effects, it may be wise not to combine it with MAO inhibitor use. Hypericum is very popular, and is receiving considerable coverage in the lay press, but long-term studies are needed. It is the most commonly used anti-depressant in Germany, where it is prescribed three times more than any of the antidepressants used in the U.S.A. The *British Medical Journal* published an overview and meta-analysis in 1996 entitled, "An Overview and Meta-Analysis of St. John's Wort for Depression".^{3,5} They reviewed and combined data from 13 trials comparing Hypericum with placebo, and demonstrated a positive effect on depression, with 55% response to the herb compared to 22% responding to placebo. Then they compared it with tricyclics, specifically imipramine, 64% responded to Hypericum with 58%

responding to the imipramine. So, it appears to be at least as efficacious (and possibly more efficacious) than the tricyclic antidepressants. It has not been compared to the SSRI antidepressants in clinical trials. Side effects were very similar to placebo, and significantly less than those taking tricyclics. The main side effect documented for Hypericum is photosensitivity, which can occur with large doses, though this appears unlikely at usual doses. The time frame for these studies was short, with only eight weeks maximum follow-up.

Echinaceae. Echinaceae was reported to be the most commonly purchased herb in the U.S. in 1996-7. There are three different species of Echinaceae sold: *E. angustifolia*, *E. purpurea*, and *E. pallida*. It's available as a root extract or tincture, and very popular for use to treat viral URI's. It is used as an "immune booster" and to treat colds and other viral and bacterial infections. There are several published studies on Echinaceae, but with a paucity of large randomized controlled blinded clinical trials. Animal and *in vitro* studies demonstrate increased cell-mediated immunity, enhanced macrophage activity, increased phagocytosis, and one Echinaceae species seems to have antistaphylococcal and antistrep activity. The herbal literature advises it for short-term use only, because it may activate the immune system. So, most lay sources advise against its long-term use, for fear of inducing autoimmune illness, and against its use at all in patients who have any autoimmune illnesses such as SLE, rheumatoid arthritis, or multiple sclerosis. However, there are no controlled studies to indicate that autoimmune flares have been a problem with the use of Echinaceae. Toxicity is reported to be rare and most evidence to date suggests that Echinaceae seems safe.

Uva Ursi or bearberry. This is an evergreen shrub, found in the forest of North America. It is an old Native American herb, used to treat and prevent urinary infections. The leaves are chewed and eaten, and are available as pills. This herb appears likely to be safe, with no reported toxicities, but the paucity of good data on safety and efficacy make it difficult to recommend.

Saw Palmetto (*Serenoa repens*). Commercial extract of saw palmetto (including one called Permixon) is increasingly used by men who take it to relieve benign prostatic hypertrophy (BPH) symptoms. The farmers in the southern U.S. are happy about this: the plant is a weedy little palm which takes over the fallow fields, and farmers must pull the plants out before they can replant their crops, but now they can sell their erstwhile weeds on the market. There is some data to indicate that it may help relieve symptoms of prostatism, and toxicity in trials to date has been negligible. It contains a mixture of chemical compounds and has activity on several levels: there is slight 5-alpha-reductase activity, but likely too little to be clinically significant, and in trials there has been no effect on PSA levels, which should drop if there is significant 5-alpha-reductase action.⁶ It has been shown to block binding of dihydrotestosterone to prostate cells' androgen receptors, and this is the most popular current theory for its mechanism of action. One European trial showed the extract to have similar efficacy to finasteride, and small trials comparing it to alpha-blockers have shown no significant differences in efficacy.⁷ All trials are hampered by the presence of large placebo effects consistently found in trials about treatment for

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the symptoms of BPH. Larger placebo-controlled trials are sorely needed.

Garlic (*Allium sativum*) seems to lower cholesterol, and inhibits clotting. It has evidence of fibrinolytic activity and it lowers platelet aggregation *in vitro*. It may help lower blood pressure; there have been studies with divergent results on garlic's effect on treating high blood pressure. There is indirect evidence that it may have an antibiotic effect, and it has been touted as helping to treat colds and yeast infections. It has ingredients that are antibacterial but whether it works as such when ingested is not that clear. Some herbalists say it ought to be eaten raw instead of cooked, because cooking seems to inactivate its main pharmacological ingredient, allicin. The best effect was seen with very high doses, which will be equivalent to 5-20 raw cloves a day for a 175 lb. person; this might be socially problematic! There were 2 meta-analysis by different researchers out of Oxford, England in 1993.^{8,9} Each reviewed studies with standardized powdered garlic (with a standardized allicin content). They had conflicting results, and they came up with opposite conclusions. More recent trials have also had conflicting results, some showing significant decreases in serum LDL cholesterol, and others showing no effect. The discrepancies may depend on the garlic preparation used. The upshot is that garlic **might** lower cholesterol, and it **might** lower blood pressure. It is unlikely to have adverse effects beyond halitosis, though some experts recommend that patients not take garlic supplements if they are anticoagulated, for fear of additive effects.

Feverfew is used for migraine headaches. Two or three fresh leaves are supposed to be ingested every day, however, it is usually not sold as fresh leaves. It may have a spasmolytic effect, similar to methysergide or parthenolide. It has indirect anti-serotonin properties on animal tissue *in vitro*.¹⁰ Its clinical efficacy has not been demonstrated with well-designed large clinical trials. Many commercial preparations available in the U.S. seem to have a minute amount of the herb, which is unlikely to have any effect. It appears safe thus far but good studies are needed.

Valerian is probably the most commonly prescribed sleep medicine in Europe. It is from the root of the plant *Valeriana officinalis*. It has been used medicinally to induce sleep for thousands of years. It has an ingredient that binds to the benzodiazepine and other receptors in the brain, and it has sedative properties. It is available as a tincture, or freeze-dried extract capsules. Its safety seems well established, especially considering its widespread and long-term use. A published case report of an intentional overdose showed that its toxic effects were very mild. In some small studies, it doesn't seem to cause any addiction or rebound insomnia when it is discontinued, but larger well-designed studies are needed.

Dong Quai or Tang kuei. *Angelica sinensis* is the Latin name for this medicinal plant, which has been called "the female ginseng," and it is often used for various gynecological ailments. It is purported to have weak estrogen-like activity and so some literature has advised avoiding use of the herb for patients who have breast cancer. However, it does not have phytoestrogens, and research to date has not been able to clearly identify whether it does have any estrogen

activity. It does contain several coumarins, which are vasodilators and antispasmodic, though the utility of these effects has not been well-defined. Clinically, it is being used for menopause, menstrual irregularity, PMS symptoms, and as a women's general "tonic" (a word used frequently to describe herbal medicines, meaning that it helps people adapt to their environment, keeping them healthy, and making them feel more energetic). It appears to be safe in the usual doses but studies are lacking. It is popular right now, especially for treating menopause symptoms.

Ginseng (*Panax ginseng*). There many different plants that are sold under the name "ginseng," but the genus *Panax ginseng* is the source for true ginseng root. Adulteration and the use of other plants called Ginseng (e.g. Siberian Ginseng, American ginseng, etc.) are a problem in identifying its characteristics. True ginseng root is very expensive; it takes six years to grow a crop and it is easily and commonly adulterated, and easily inactivated by processing. Ginseng is supposed to be an adaptogen, or "tonic" and is thought to be antifatigue and antistress. It was thought to have some estrogenic activity, but recent studies have not found any evidence of direct estrogenic effect. It might induce hypertension in some individuals. Ginseng is a classic example of the "doctrine of similars," which is found in all cultures. The "doctrine of similars," states that there is some physical clue about the plant which tells you what malady it will be useful for. For example, if a plant has yellow sap, it would be useful to take it for jaundice. Ginseng root grows in various shapes, but it often looks like a little person: it may look like it has arms and legs, and herbalists have taken this as a sign that it is supposed to be for the well-being of the whole body. It also often looks phallic, and at times even a bit like female genital labia, so it has been purported to be useful for male potency, and as an aphrodisiac for males and females. Ginseng has apparently been studied to see if has any aphrodisiac effect, with good evidence that it does not have any effect as an aphrodisiac. However, it is still marketed as such, and herbalist literature states that it is useful to improve the sex life. (There are a countless other interesting examples of the "doctrine of similars." For example, there is a leaf that the South Americans use which is quite stiff and if it is crumpled up, it will pop back into shape, and that leaf is also used as a male aphrodisiac.)

There are many varieties of ginseng, and it is often not labeled correctly. There is adulteration and often processing inactivates it. All of this variability has made it hard to investigate reported toxicities. There have been reports published of ginseng toxicities, and the product when investigated has been found to not have any ginseng. There are no good studies that demonstrate ginseng's effectiveness. It is probably safe, based on the thousands of years it has been used, but adulteration makes it very hard to be certain.

Ginkgo biloba. Ginkgo leaves come from an ancient tree species; it has been around since the ages of the dinosaurs. It is hardy and grows in cities all over the world. A standard extract is produced from the leaves which contains 24% flavinoids and 6% terpenes; tablets always have 40 mg of the extract. It is easy to standardize and relatively inexpensive and commonly available, so it is easier to study this herb than one like ginseng. Its use is primarily to prevent or improve memory loss, especially in the elderly, and a recent article in JAMA demonstrated a small but significant effect on

decreasing progressive memory loss in patients with mild dementia.¹¹ It is supposed to improve cerebral blood flow, and some studies have indicated a possible positive effect for other neurological ailments including headaches, tinnitus (especially if it has a CNS source) and depression. There is one study published in the *Aviation, Space, and Environmental Medicine Journal* in 1996.¹² The authors did a randomized controlled trial of an extract of ginkgo biloba 761 used for altitude sickness during a Himalayan expedition. There were 44 men in the study. They randomized them and gave half of them 80 mg orally BID of standardized ginkgo extract and compared them to a double-blinded placebo group. The results were striking: none of the ginkgo group developed signs of cerebral mountain sickness vs. 40.9% developing such symptoms in the placebo group ($p = 1.4 \times 10^{-3}$). The difference was also striking for respiratory symptoms and high altitude pulmonary edema (HAPE): three in the ginkgo group developed respiratory mountain sickness symptoms (13.6%) vs. eighteen (81.8%) in the placebo group ($p = 1.2 \times 10^{-5}$). Since prior studies had indicated that ginkgo had a positive effect on improving circulation to the extremities during cold exposure, the researchers took a plethysmography device along on the climb up the mountain. Then they checked the study participants for both objective evidence of compromised blood flow of their extremities with plethysmography, and a questionnaire about symptoms of vasomotor constriction (stiffness, numbness, aching). These were also highly significant and demonstrated a marked improvement of peripheral circulation among the study participants who took ginkgo. This study has attracted virtually no notice in the medical community, and perhaps it needs to be repeated to see if it can be replicated in a larger population before ginkgo can gain acceptance as a possible safe and efficacious preventative for acute mountain sickness and frostbite. It increases arterial and capillary vasodilatation, and it slightly lowers clotting time, so it should be used with caution in people on aspirin and blood thinners. A reported overdose of Ginkgo caused restlessness, nausea, vomiting and diarrhea. This is an herb which is ripe for well-controlled sizable trials.

Glucosamine is a constituent of cartilage glycosaminoglycans. This is sold as a dietary supplement. Glucosamine stimulates cartilage cells to produce glycosaminoglycans and proteoglycans, which may allow restoration of cartilage in intra-articular destructive diseases. There have been trials, all short term, that have shown that it's effective in relieving pain and increasing range in motion in osteoarthritis. A four week double-blind trial in 252 osteoarthritis patients demonstrated that glucosamine was significantly superior to placebo.¹³ In another four-week trial on 200 patients, it was as effective as ibuprofen 400 mg tid from the second week on.¹⁴ Glucosamine seemed slightly slower to relieve symptoms, but subsequently it works as well (or better than) ibuprofen. A double-blind eight-week trial with 40 osteoarthritis patients randomized to two groups: one group took 500 mg glucosamine tid and another took ibuprofen 400 tid.¹⁵ This study demonstrated that ibuprofen and glucosamine were as about equally effective during the first two weeks of the trial, and by week eight, the glucosamine group was doing better. Another study demonstrated that the positive effect of glucosamine on arthritis symptoms seems to last for a week or two after stopping the drug, unlike NSAIDs. In all trials, glucosamine is well tolerated. Any side effects were equally as common in the

placebo group. Commercially, it is often combined with chondroitin sulfate. There are no good studies that I have found on the efficacy of chondroitin but there was a popular book called The Arthritis Cure, that was a bestseller last year. The author claimed that glucosamine should be combined with chondroitin for maximal efficacy, and now they sell preparations with the two combined in the ratio he proscribed. There was a recent review in *The Medical Letter* (a conservative and respected publication), in September of this year.¹⁶ Their view was that glucosamine is safe and possibly effective, but there is a need for longer trials. As they have with all "dietary supplements" that they review, they caution with the fact that this is a dietary supplement, so you never know if what you are buying is what is on the label. The NIH's Office of Alternative Medicine is currently funding a large trial on both glucosamine and chondroitin in the treatment of osteoarthritis.

Toxicities from Herbs

There are some important herbal toxicities that practicing physicians should be aware of.

Germander. This is an old time drug used to treat diarrhea and used topically for oral lesions. It was found to cause hepatitis and its use has been banned in France, but is still readily available in the U.S.A. It's especially worrisome when patients combine it with other potential hepatotoxins.

Chaparral. This is an old American Indian remedy. This is used for **everything** (always a good warning sign that an herb is probably not good for anything!), including arthritis, cancer, VD, tuberculosis, URI symptoms, as a hair tonic, and to remove LSD from your system. It has been conclusively proven not to remove LSD from your system, by the way. There is an ingredient in chaparral that has very potent antioxidant qualities called NDGA, which has no proven medical value, but it has been shown to increase the life span of a mosquito from 29 to over 45 days. Nevertheless, chaparral was removed from the Generally Recognized As Safe (GRAS) List in 1990 because it causes subacute hepatic necrosis.^{17,18} You can still buy it in health food stores in the U.S.

Comfrey is an old-time remedy and its name sounds like it should make the ill well again. It comes from the plant *Symphytum officinale*, and it is used for many different illnesses, something of an herbal "wonder drug." It used to be called "knit-bone," and was applied externally as a poultice for broken bones and internal injuries. The tea has been used to treat peptic ulcers, it is purported to "purify the blood," in addition to being recommended for almost any ailment you can think of. All comfrey products tested have contained hepatotoxins called pyrrolizidine alkylolids. There are several herbal remedies in various countries with these same toxic ingredients, including "bush tea," and "gordolobo tea" in Central America and Mexico; these also contain pyrrolizidine alkaloids.¹⁹ They can cause liver cell necrosis and veno-occlusive disease in lungs and liver. Veno-occlusive disease can cause pulmonary hypertension, and there have been several documented cases of comfrey-induced pulmonary hypertension. The toxicities seem to be related to the total dose, host susceptibility and route of exposure, with the root being considerably more likely to have significant levels of toxic

alkyloids than the leaves. It's been banned in Great Britain and in Canada, but you can still buy it here in the U.S. Upon review of several of the herbal books at a local bookstore, several had sections extolling the virtues of Comfrey, with nothing about potential health problems or any indication that the herb has been banned in other countries.

Scullcap (*Scutellaria lateriflora*) is commonly used for "female weakness," as a tonic, and it is purported to have tranquilizing and antispasmodic activities. The studies done on it to date have failed to find any effect at all, so it seems doubtful that it has any medicinal value. It was reported to be hepatotoxic in four women who were using it to treat stress. Subsequently, the investigators had reason to wonder if this was actually caused by a Germander substitution. It is not really clear that the scullcap is toxic but there have been published warnings about possible toxicity.²⁰

Sassafras (*Sassafras albidum*) is what old-time root beer used as a flavoring and it was used as "spring tonic". It has safroles and allylbenzenes which have been proven to cause cancer in mice. It is not clear if it is carcinogenic in humans because we don't have the enzymes that change the sassafras ingredients into the carcinogenic substances, so we probably don't have the risk of carcinogenesis that mice have. It is not clear if it should be banned, but right now it is prohibited by the FDA as a flavoring or a food additive based on the murine studies. However, you can still get it as an herbal remedy, primarily in sassafras tea. There is no evidence that it does anything medically at all, so it may be prudent to advise avoidance of this herb as long as there exists doubts about its safety.

Naturopathy

In order to be licensed as a naturopath in Hawaii, a practitioner must have a N.D. degree, obtained from a four-year naturopathy school. There are two such institutions in the Pacific Northwest, one in Arizona, and there are others opening in the East Coast. Their training is like medical school, their first two years are basic science, pathology and other basic sciences, and the latter two years are devoted to study about herbal medicine, homeopathy, nutrition and lifestyle changes, which are the basics of modern naturopathy. Most schools teach something about spinal manipulation, and spend considerable time teaching counseling techniques, and some teach some acupuncture, although usually that would be taught at a separate institution. The training in the last two years is in the outpatient clinics that are affiliated with the

schools.

Naturopathy started in Germany, again as a result of physicians' horror at the toxicity of the commonly used medical treatments. Early naturopaths were interested in "water cures" where they gave patients pure spring water to make them better, and they used treatment intended to build up the healing power of nature, with emphasis on gentle, nontoxic remedies. A naturopath interviewed here on Oahu indicated that about two-thirds of his practice was pain treatment, adjunctive cancer care, chronic allergies, chronic arthritis, chronic GI problems (especially irritable bowel, chronic nausea) and menopause and PMS. Some naturopaths interested in women's

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health may have most of their practice treating menopause and PMS. Basically, naturopaths often treat illnesses that conventional physicians don't have reliably safe or effective treatments for. Naturopaths can order diagnostic tests and they can give homeopathic treatments but they don't have a license to prescribe drugs.

Chinese Medicine

Like many complementary medical systems, Chinese medicine is based on the idea that illness arises out of a life or body force that has been disrupted or placed out of balance. Chinese medicine is based on the idea of Ch'i, the life force. In Chinese medicine, all of life is Yin or Yang, and sickness is due to the imbalance of these two opposites. All medical care is directed to adjusting the balance. The concepts of Yin and Yang are complex. Yin is cold and female and Yang is hot and male, but it is much more complicated than that.

The Chinese system of medical diagnosis is very different from anything that is taught in western medical schools. There is extensive emphasis on using the pulse for diagnosis. There are six different pulse points with three depth levels for each pulse point. Chinese practitioners take the pulse very carefully and they make the diagnosis from the character of the pulses. In addition, the tongue is also used for diagnosis, and Chinese texts may have many pictures of tongues that tell you what the diagnosis is. In addition to the pulse and tongue diagnoses, practitioners depend on general observation of the patient. The diagnoses are not like anything that western physicians are familiar with. The nomenclature is entirely different, with symptom complexes that are grouped together in ways entirely different from any western symptom complexes. Since the language for illnesses is foreign from Western medicine, it is very difficult to translate back and forth. "Stagnant blood" is one of the most common diagnoses, and "extravasation" is frequently referred to as a common illness. It is very confusing to try to make sense of Chinese medical books after learning about illness from a European perspective.

Chinese herbs are given in formulae or combination, and it would be unusual to have a single herb given. Herbal formulae are usually steeped as a tea, often unpleasant-tasting. There are over 7,000 different herbs that are used in Chinese medicine. Patients will be prescribed a bag with a mixture of herbs, and it is not uncommon for the herbalist to use substitutions by accident or on purpose, which makes it very difficult to track ingredients or the source of any toxicity. In general, toxicity from Chinese herbs is quite uncommon. Of the 150 commonest herbs given, about 10 of these have clearly had instances of reported toxicities. But most of the herbal formulae have been used for many thousands of years. Cases of severe or fatal poisoning do occur with both Chinese herbal medicines and Chinese proprietary medicines (packaged pills with combinations of drugs for a specific ailment, e.g. "Dr. _____'s arthritis formula"). Both herbal and proprietary medicines have been contaminated with serious toxins and prescription drugs, including heavy metals, steroids, potent NSAIDs and substituted cheaper herbs. The main toxic effects from Chinese medicines are from a few things that are used: podophyllin, aconites and anticholinergic effects from things that are often used in asthma medicines.

There is an example of a Chinese proprietary medicine, Chuifong Toukuwan, called by most of the westerners who used it "black balls from China." The pills look like little gumballs and they were used

for arthritis. There is a published report of thirteen American patients taking this for rheumatoid arthritis and they all improved markedly when they were taking it.^{21,22} However, then they developed side effects, including ecchymoses, Cushingoid appearance, diabetes, hypertension, arrhythmia, weight gain, and one had compression fracture and one had bone marrow suppression. When the medicine was analyzed, it was found to contain indomethacin, prednisone, small amounts of lead, and aminopyrine (a very toxic substance known to cause bone marrow failure). Also, when the patients stopped taking the first batch and started the next batch, all had a flair of their arthritis symptoms, indicating that they probably received quite different ingredients in the second batch. So it would be wise to caution patients not to take unlabeled, proprietary medicines.

Acupuncture

Acupuncture is based on twelve meridians, or lines of energy, in the body. Acupuncture points lie on the meridians. Meridians don't necessarily follow the nerve pathways. It is clear that acupuncture releases endorphins, and it changes the electrical conductivity of the skin. Whether that has anything to do with whether or how acupuncture works, nobody knows. In the West, acupuncture is primarily used for pain, but in China they use it for just about every illness. The research on it is demonstrating that it may be very useful for a variety of symptoms in addition to pain. The studies are small, and it's been very hard to have adequately blinded trials. It is possible to blind the patient to some degree, but it's been difficult so far to blind the persons delivering the acupuncture treatment.

In the studies so far, the most promising evidence is for acupuncture's role in treating nausea. There is enough evidence that many who have reviewed the studies would say that acupuncture is useful for nausea, especially postoperative nausea. *The Oslo Review on Research in Alternative Medicine* published an endorsement for acupuncture's effectiveness in nausea, chronic pain and post-stroke recovery but found no good evidence for its effectiveness in treating asthma or addiction treatment. The NIH Advisory Counsel on Alternative Medicine, in October 1997, recommends acupuncture treatment as effective for nausea and post-operative dental pain. The *American Journal of Chinese Medicine*²³ had a very good review this year that indicated that well-designed studies really need to be done because so many of the studies published have been poorly done. But there is clearly some positive evidence from some of the better trials that demonstrate that it is probably useful in tinnitus, angina, dry mouth, post-operative pain, migraine, dental pain, dysmenorrhea, tendinitis and low back pain and clear evidence of efficacy in nausea. Research into the mechanism of action of acupuncture is ongoing. Recently, a study using functional MRI imaging evaluated the eye acupuncture points, which are found in the foot. They showed brain activity in the visual cortex when the points in the foot that are used for eye illness are stimulated.

Acupuncture is generally very safe as long as practitioners use disposable needles. (When reusable needles were used, there was hepatitis and AIDS passed to patients.) Today, in developed countries complications are very rare.

Chiropractic

Chiropractic was started by a fellow named Daniel David Palmer in the late 1800s. He had apprenticed to be a M.D., which was a common method used to become a physician before they revised the medical education system and started to make students go to accredited schools. Mr. Palmer thought that there was a flow of Innate Intelligence through the body (which is a lot like ch'i, and the "vital force" of the other alternative disciplines). If there was interference with the flow, patients would fall sick, and cure could only ensue if the practitioner could eliminate the interference. This is accomplished by fixing "subluxations of the spine." This is the basic tenant of chiropractic.

To become a chiropractor, students must go through four years of chiropractic education after at least two years of college and then they are eligible to get a D.C. degree. Chiropractors are licensed in Hawaii. They also have specialization, with the addition of up to three years of additional training. Chiropractic students can specialize in internal medicine, radiology, sports medicine, orthopedics, neurology and nutrition.

There are different kinds of Chiropractors. There are two national organizations and they are called "Straights" and "Mixers" and there is a history of considerable conflict between the two types. Straights make up about 15% of chiropractors, and they are of the more old-fashioned school with the philosophy that **all** illness is caused by spinal subluxations. They consider themselves as primary care physicians, they treat all diseases and promote health with chiropractic manipulations. There are even colleges that include the designation "Straight Chiropractor" in their name to distinguish themselves from "mixers". The Mixers treat mostly back and musculo-skeletal pain, and sometimes may also use diet, herbs, homeopathy, and other treatments and are not purists who will only treat with spinal manipulation. The mixers are a much bigger group and they include the practitioners who just treat back problems with spinal manipulation, and refer everything else to other practitioners.

There is fellow from Hawaii named Kurt Butler who is a quack-exposer. He wrote a book about the dangers of alternative medicine, and he relates the following anecdote: In 1989, he went to twelve chiropractors who advertised free initial evaluations in the Honolulu newspaper. When he saw them, he indicated to each of them that he had symptoms of pressure-like chest pain when he walked with associated shortness of breath, and that he had epigastric abdominal pain at night that woke him up, which was relieved when he ate something and came on when he was hungry. So, he presented to them with symptoms of peptic ulcer disease and coronary artery disease, and yet none of them referred him to a doctor. All of them indicated a plan to treat him with chiropractic manipulation alone.²⁴

Studies on the efficacy of spinal manipulation are conflicting, and most of them are of poor methodological quality. But there have been enough studies that have had positive results that the Agency on Health Care Policy and Research in the U.S. has recommended manipulation for acute low back pain, and the British version of our agency did the same.

Koes, et al., in *Spine* 1996, did a systematic review of randomized controlled trials of spinal manipulation for low back pain.²⁵ They pointed out in this review that this is one of many, and there are probably more reviews than there are actual studies about spinal manipulation for low back pain. They viewed 36 randomized

controlled trials and compared spinal manipulation with other treatment. They used a complex methodological scoring system, with 100 being the best and 0 being the poorest. The study with the highest methodological score of all (which happened to be a study by Koes himself) was rated only 60 out of a 100. So, the quality in general is very poor. Of these studies, 53% or 19 of those studies showed favorable results for spinal manipulation. Of the 5 studies that had the top methodological scores (between 50 and 60), 3 were positive and 2 were positive in the subgroup only. There was no clear relationship between the methodology score, and whether the results were positive or negative. For acute low back pain, 5 were positive, 4 were negative and 3 were positive in the subgroup only. For subacute or chronic low back pain, 5 were positive, 2 were negative and 1 was questionable. So there is a tendency for manipulation to appear efficacious. In long term follow-up studies, 6 of 16 had a positive effect after 3 months. The conclusion was that we desperately need better trials.

There have been concerns about the safety of spinal manipulation, especially after a few case reports in the orthopedic journals of spinal transection from manipulation.^{26, 27} However, the data available show a relatively good safety record for low back manipulation. There have been some cases of severe adverse effects from cervical manipulation that caused serious concern. However, the rate of adverse effect is low: most sources estimate 5 to 10 adverse events out of every 10 million spinal manipulations. The concern is that if adverse effects do occur, it could be to induce paraplegia, an obviously disastrous effect. One review of cervical manipulation's safety efficacy vs. NSAID-use safety and efficacy concluded that NSAID's efficacy for cervical neck pain has never actually been studied, so there is no efficacy data at all. Cervical manipulation, however, has been studied, and there is some evidence that it is efficacious. When risks were compared, even for serious life-threatening complications, NSAID use is statistically much riskier, probably a 100 times riskier than using cervical manipulation.²⁶

Advice about Advising Patients

When advising patients about the use of alternative medicine, there are some opinions that can be given without concern about being inaccurate: one is that conventional medicine's ability to diagnose is clearly superior to any known alternative methods and should be utilized whenever the diagnosis is in question. Second, complementary treatments may have a very useful role when allopathic treatment is insufficient to relieve patients suffering, and when the patient won't accept any conventional treatment that has been recommended. Eisenberg, et al. in *Annals of Internal Medicine*,²⁸ published an article on how to advise patients on alternative medicine. He states that practitioners should ask non-threatening questions about "other" treatments used to treat illness or to maintain health, and to avoid the words "alternative" or "complementary," or other more pejorative terms (e.g., "unproven"). Only after a complete conventional medical diagnostic evaluation has been done and advice has been given about conventional treatment options, should a detailed discussion about alternative medical treatments be initiated.

Dr. Eisenberg considers the following therapies likely to be **effective**: spinal manipulation for low back pain, acupuncture for nausea, and relaxation therapy for chronic pain and insomnia. He

considered **risky**: spinal manipulation of the cervical spine, some herbs, “patent” remedies from uncontrolled places, restrictive diets, megadose vitamins, IM or IV substances and reusable needles. He considered **very low risk**: homeopathy, most massage, prayer, guided imagery, hypnosis, some herbs, and acupuncture with disposable needles. He advised to watch for indirect toxicity in the form of delay. There is also concern that some of these therapies, particularly prayer and guided imagery, can engender guilt and severe emotional duress because if the therapy fails, the patients can succumb to the idea that they were not “good enough” to get a benefit. Also, practitioners need to alert patients that drug-herb or drug-diet interaction can occur, for example, people on grapefruit diets can induce potentiation of calcium channel blockers, and in particular chemotherapy regimens may be rendered more toxic, or ineffective, due to concurrent use of alternative medicines. It is much preferable if patients are willing to try one thing at a time, so that efficacy can be assessed and to avoid increasing toxicity.

Eisenberg also outlines a step-by-step approach to helping patients try out alternative therapies with their physician’s assistance to determine if the treatment has been effective and safe, and he recommend that physicians involve themselves in supporting patients’ trials of treatments from a compassionate and evidence-based perspective. He recommends against referral based solely on patient demand, but only when it is part of a rational therapeutic plan. He advises that there are times when we must “agree to disagree,” and he ends with the following statement: “No patient should feel that their medical journey is to be taken alone or according to some stealth trajectory, invisible to their conventional providers. The delivery of medical care, like the experience of illness is best viewed as a journey shared”.²⁸

CAM is a fascinating area of investigation and the practicing physician will need to keep abreast of the literature as studies are published. There is increasing funding support for research in this area, and conventional medical journals are likely to be publishing research about “alternative” practices in the coming years. As our knowledge base grows, it is likely to further blur the line between allopathic and complementary/alternative medicine; making the moniker “Integrative Medicine” a reality.

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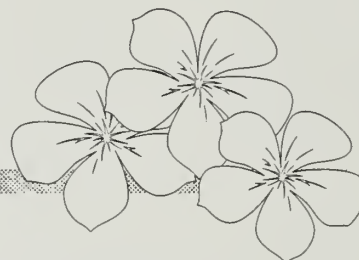
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Longs Drug Stores

National Elevator Industry Health Benefit Plans

Nippon Life Insurance

NYL Care Health Plans

Principal Financial Group

Queen's Preferred Plan

UNICARE Life & Health Insurance

United HealthCare

Medicare

University Health Alliance/HDS

Other Blue Cross Plans (through HMSA)

Hawaii Electricians Health Fund (UHA)

Hawaii Laborers Health & Welfare Trust Fund

Aloha Care Quest

Kaiser Quest

Kapiolani Health Hawaii Quest

Straub Care Quantum

Veteran's Administration

HMAA

Worker's Compensation



Occupational Exposures and Knowledge of Universal Precautions Among Medical Students

Sandi A. Kwee MD & Leilani Ka'anehe MD

Purpose- To examine the relationship between occupational exposures and knowledge of universal precautions among medical students. *Method:* Graduating medical students were given a survey regarding occupational exposures suffered during their clinical rotations. The survey also tested students' knowledge of universal precautions by asking them to indicate what combination of gloves, mask, and eyeshields should be worn to satisfy universal precautions for ten common procedures. *Results:* At a seminar one week before graduation, 45 senior medical students were given the questionnaire. The response rate was 100%. 84% of the surveyed students suffered at least one occupational exposure during their clinical training. Of those who had an exposure, 42% reported at least once to an exposure center. The mean percentage of correct answers on the protective equipment questionnaire was 71%. No correlation between number of exposures and score on the protective equipment questionnaire was found ($r=0.0$). *Conclusion:* Occupational exposures to blood are common among medical students. Few students report to exposure centers. Knowledge of universal precautions may not correlate with reduced risk of occupational exposures among medical students.

Introduction

Accidental exposures to patient blood and body fluids are common among healthcare workers. To address this problem, the Centers for Disease Control introduced universal precautions in 1987. In 1991, the use of universal precautions was prospectively shown to decrease occupational exposures among practicing physicians.¹ In 1992, the American Association of Medical Colleges recommended that medical schools teach universal precautions to students prior to their clinical rotations. At the time, several studies suggested that occupational exposures were common among residents and medical students. A survey at University of Southern California - Los Angeles County found that 71% of surveyed residents and medical students suffered at least one occupational

exposure in one training year with only 9% of exposures being reported.² Another survey at the University of Washington found that 48% of their graduating medical students had experienced occupational exposures.³ These statistics are worrisome, and they emphasize the need for efforts directed at reducing occupational exposures among medical students. While most medical schools have implemented universal precautions training, it is still unclear whether knowledge of universal precautions decreases a medical student's risk for occupational exposures. This study sought to explore the relationship between knowledge of universal precautions and frequency of occupational exposures among medical students at the University of Hawaii John A. Burns School of Medicine.

Method

At a seminar one week before graduation, 45 senior medical students were given a questionnaire composed of two parts. The survey was collected at the end of the seminar. The first part of the questionnaire surveyed the number of occupational exposures experienced by students during their 3rd and 4th years of training and the number of times they sought clinical evaluation after an exposure. Occupational exposures were defined as contact with a patient's blood or body fluids via a needlestick, cut, or splash to a wound or mucous membrane. The second part of the survey assessed knowledge of universal precautions. Students were required to indicate what combination of gloves, mask, and eye-shields should be worn to complete each of ten procedures in accordance with standards obtained from Centers for Disease Control recommendations and review of the literature.⁴ The ideal responses for each procedure, as listed in table 3, coincide with those from a similar study on universal precautions by Koenig and Chu.⁵ The percentages of students who indicated the correct level of protective equipment utilization, under-utilization, and over-utilization were then calculated. The students were also asked attitudinal questions about their universal precautions training. The exposure data was then correlated with the scores on the procedures questionnaire and the attitudinal questions.

Results

100% of the surveys were returned. The sample comprised 87% of the graduating class of 1997 at the University of Hawaii John A. Burns School of Medicine. These medical students had received yearly universal precautions training in the form of problem based learning cases, seminars, and audiovisual presentations as required

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by their curriculum. Students fulfilled most of their clinical rotations at university affiliated community hospitals in Honolulu, Hawaii. 76 exposures occurred among the 45 students. 84% (38/45) suffered at least one exposure (with a range of 0 to 4 exposures). 42% (n=16) of students who had at least one exposure, reported at least once to an exposure center (with a range of 0 to 2 reported exposures). The largest number of exposures occurred during surgery (n=19), obstetrics and gynecology (n=15), and emergency medicine (n=8). All but one of the exposures caused by another healthcare worker (n=15) occurred during surgical rotations. Table 1 lists the number of exposures by rotation. Table 2 summarizes the reasons given by students for exposures.

Table 1. Number of exposures by rotation

Rotation	# Exposures
Surgery	19
Obstetrics and Gynecology	15
Emergency Medicine	8
Internal Medicine	6
Pediatrics	3
Medical or Surgical Intensive Care	6
Dermatology	1
Neurosurgery	1
Orthopedics	1
Family Practice	1
Cardiology	1
Plastic Surgery	1
Endocrinology	1
Rotation not specified	12

Table 2. Reason for Exposure

Rotation	#
Emergency situation	17
Patient moved	16
Carelessness	18
Exposed to body fluid by another health care worker	15
Other (glove broke (x4), instrumentation sharper than expected, in surgery, stuck by attending (2x), sprayed, poor visibility during suturing, pumping blood vessel, unknown, perforated an abscess, poor visibility, blood draw)	13

The mean percentage of correct answers on the protective equipment questionnaire was 71%. The mean percentage of incorrect answers indicating over-utilization of equipment was 10.7%. The mean percentage of incorrect answers indicating under-utilization of equipment was 18.2%. Table 3 lists the procedures and student responses. No correlation was found between the number of correct answers on the protective equipment questionnaire and the number of exposures a student experienced ($r=0.00$).

89% (40/45) of surveyed students agreed with the statement "I feel that my knowledge of universal precautions is adequate".

Agreement with this statement was negatively correlated with the number of exposures experienced by a student ($r=-0.41$, $p < 0.01$). 78% (35/45) of surveyed students agreed with the statement "I feel that I have been given adequate instruction on what to do in the event of a body fluid exposure". Agreement with this statement was negatively correlated with the number of exposures experienced by a student ($r=-0.35$, $p < 0.05$), but not significantly correlated with reporting to an exposure center.

Discussion

Like earlier studies, this study found a high prevalence of occupational exposures among medical students. These findings, while not surprising, should be interpreted in light of several limitations. Since data was collected using a survey instrument, this study may be prone to reporting bias. Students may have under-reported or over-reported exposures. Under-reporting appears unlikely given that students were asked to recall potentially dangerous (i.e. not easily forgotten) events. Students may also under-report out of concern for being identified and placed at risk for negative academic consequences. To allay these concerns, this survey did not solicit personal information. Given the high prevalence of exposures reported in this study, perhaps the students over-reported exposures. The fact that most of the students reported only 1 or 2 exposures, with 4 being the most exposures reported by one student, does not suggest over-reporting. Furthermore, almost half of the exposed students in this study went to an exposure center suggesting that they were concerned enough about their exposure to seek further help and possible treatment. Like earlier occupational exposure studies, this study defines exposures as including both splash and percutaneous exposures. Although the risk of infection varies with the type of exposure, this study made no distinctions regarding the types of exposures suffered. The goal of this study was to assess prevalence of exposures and not risk of infection, and thus it was beyond the scope of this study to assess the seriousness of exposures. Hopefully, future research will address these matters.

Among our respondents who had an exposure, less than half reported to an exposure center. Prior studies have also found low rates of reporting among medical students.^{2,3} Under-utilization of exposure centers is a concern since post-exposure treatment is available. For example, post-percutaneous exposure treatment with zidovudine has been shown to reduce HIV transmission by 79% and current guidelines contain recommendations for combination anti-retroviral regimens.⁶ While not all exposures require treatment, it is uncertain whether students are capable of assessing their need for post-exposure treatment. Thus, universal precautions training should emphasize prompt exposure reporting and the possibility of post-exposure treatment.

One recent study by Koenig and Chu⁵ suggests that despite universal precautions training, many medical students do not know what protective equipment should be worn to be in compliance with universal precautions. Our study, which also assessed knowledge of protective equipment use, reproduces their findings. For several procedures, half of the students underestimated the recommended level of protection. Admittedly, the guidelines used to determine the correct level of protection in these studies were based on conservative recommendations. In practice, there is no universal agreement across different institutions regarding what protection is necessary

Table 3. Numbers and percentages of 45 fourth-year medical students indicating correct, excessive, and inadequate use of protective equipment for ten common procedures. (*No response was indicated on one survey for this procedure)

Procedure (and correct response in parenthesis)	Correct level of protection No. (%)	Excessive protection No. (%)	Inadequate Protection No. (%)
Drawing blood (gloves)	35 (78%)	10 (22%)	0
Suturing (gloves, mask, and eyeshields)	24 (53%)	0	21 (47%)
Coughing patient. (mask)*	17 (39%)	18 (39%)	9 (22%)
Handle Specimens (gloves)	41 (91%)	3 (7%)	1 (2%)
Suctioning Airway (gloves, mask, eyeshields)	21 (47%)	0	24 (53%)
Endotracheal Intubation (gloves, mask, eyeshields)	33 (73%)	0	12 (27%)
Gastrointestinal lavage (gloves, mask, eyeshields)*	33 (75%)	0	11 (25%)
Inserting intravenous lines (gloves)	34 (76%)	11 (24%)	0
Casual contact (no protective equipment required)	43 (96%)	2 (4%)	0
Examining non-intact skin (gloves)	37 (82%)	4 (9%)	4 (9%)

for certain procedures. Thus many students may have seemingly underestimated the protection required because the guidelines of their institution did not recommend equipment deemed necessary by more conservative guidelines. Nevertheless, the fact that many students suffered occupational exposures suggests a need for all institutions to adhere to a validated and universally accepted protective equipment guideline.

This study found that students who felt they knew universal precautions well or knew what to do in the event of an exposure suffered fewer exposures, although they did not score better on the knowledge questionnaire. This may suggest that other aspects of universal precautions training, apart from teaching appropriate protective equipment usage, is beneficial. Since retrospective studies cannot confirm causality, an equally plausible explanation is that students who suffered fewer exposures were more confident about their knowledge of universal precautions.

Current attempts at exposure risk reduction have been directed at developing effective universal precautions training programs. Unfortunately, no study has clearly demonstrated that medical students benefit from universal precautions training. One recent survey of matriculating interns at five university affiliated hospitals found no correlation between universal precautions training and the risk of needlestick injuries, rate of exposure reporting, or completion of a hepatitis B immunization series.⁷ Our study also did not find any correlation between universal precautions knowledge and number of occupational exposures among medical students. One recent study did show that medical students who scored well on a universal precautions questionnaire were less likely to suffer splash exposures, but those students still had an alarming exposure prevalence of 46% after one clinical year.⁸ Thus, no study has clearly demonstrated a large benefit from teaching universal precautions to medical students. Therefore, future efforts should not only be directed at refining universal precautions training, but also at developing other measures to protect students. Given the high prevalence of occupational exposures among medical students, more study is also needed to clarify the risk factors for exposures in this group so that specific interventions may be developed.

Acknowledgements

We would like to thank Earl Hishinuma, PhD of the Native Hawaiian Mental Health Research Development Project and Richard Kasuya, MD for their thoughtful advice and guidance.

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American Heart Association
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For a heart-healthy 1999, resolve to:

- Stop smoking or don't start
- Limit your average daily saturated fat consumption to less than 10% of total calories
- Get off the couch and become more active
- If your overweight, start a weight-loss program



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WHO ARE YOU, WOMAN

by Robert S. Flowers

*Who are you, Woman,
After all of these years,
Beyond whom I sleep with
And sometimes share tears?*

*Who are you, daring
To lie at my side —
To mother my children —
One of whom died?*

*Who are you, Precious,
Confidante, friend —
Wife, Lover, Partner —
A sweet awesome blend?*

*Who are you, sharing
These children you bore,
Carrying another
Whom we just might love
more?*

*

*You're all sorts of things —
Some mentioned above,
But know that to me
You're far more than love.*



MORE BEAUTIFUL

by Robert S. Flowers
for my expectant wife, Susan

*Your beauty has changed - perhaps you know —
The way you smile and your radiant glow.
Your body's lines have changed a bit
So your thin waisted clothes no longer fit.*

*Your silhouette has a new contour —
A different style with a different allure.
Your beauty now has an awesome impact,
That contains all the force of the Creative Act.*

*Your enlarging womb with it's convex curves
Excite my senses and Optical Nerves.
Your high full breasts preparing for milk
Have a texture reminiscent of the finest of silk.*

*You can have that old style of svelte and thin.
I prefer your curves with the joy within!
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Life in These Parts

Our Patient, F.Y. (in her 70's) volunteers at Kuakini Medical Center. She was walking down to Fort Street Mall for a Burger King lunch when a 50's Caucasian man dressed in shorts, t-shirt and shaggy hair asked her for a handout: "Can you spare 25 cents for coffee?" She countered, "You can't get coffee for 25 cents. Here's a dollar" and feeling sorry for the stranger, she invited him to come in and have lunch on her. He accepted her offer, but then he asked her to sit while he got the lunch instead...

"I thought you were broke?" F.Y. said. He bought lunch for two and explained...

"I'm president of a firm in Chicago. I heard there were very few homeless in Hawaii and I was checking out the report."

After lunch, he produced a bill fold with 100 dollar bills, gave her five bills and his name card. F.Y. was too flabbergasted to refuse the offer...

A three year \$1.79 million study will investigate the possible links of degenerative brain diseases (e.g. Parkinson's) and exposure to environmental toxins. The funding was announced by Senator Inouye and assigned to the Honolulu regional office of the U.S. Department of Veterans Affairs and the Pacific Health Research Institute. Dr. G. Webster, UH Med School associate clinical professor will lead the research project of Japanese-American men who joined the Honolulu Health Program in 1965. More than half of the original 8,000 subjects have died. UH epidemiologists Drs. David Morens and Andrew Grandinetti will be associated with the study. Morens and Dr. Jim Davis (also with UH Med School) have published their research which seems to indicate that people who eat foods high in Vit E have a lesser risk of developing Parkinson's.

News Briefs

A \$10,000 poll of 400 Hawaii voters sponsored by a pro-marijuana group reveals that 38% strongly supported the use of marijuana for medical purposes; 25% somewhat supported its use; 21% were strongly opposed, and 7% somewhat opposed; while 10% did not know. 41% strongly supported farmers growing and selling marijuana; 18% somewhat supported this. 15% were strongly opposed; 9% were somewhat opposed and 18% did not know...

University Health Alliance has signed a contract with Rx America LLC based on Salt Lake City. Rx America is owned by Long's Drug Stores, Inc. and American Drug Stores, Inc.

Coordinators for PLCO Trial (Prostate, lung, colon and ovarian cancer trial) are recruiting 1,700 more participants (ages 55 to 74) to meet the

Hawaii quota of 10,000. Lance Yokochi, is principal investigator.

Russell Stodd's Aloha Surgery Center, and outpatient surgery center with three operating rooms, will be available by early January. (Maui News)

State auditor Marion Higa feels that physician assistants should be licensed to prescribe drugs (including controlled substances.)

Protest

(Excerpts from Malcolm Ing's letter to the editor, *Honolulu Star Bulletin*, November 13, 1998)

"The original HMSA partnership created in the 1940's by physicians and administrators has given way to a big business mentality..."

"Physicians are now being paid at the lowest possible level and have received notice from HMSA of another 4.5% pay cut for surgical procedures..."

"Local hospitals have received notices from HMSA that future reimbursements for care will be decreased..."

"All the while, the surplus income that is derived by HMSA premium payments is accumulating in the 'millions for investment' purposes..."

"Meanwhile, members are kept happy by being informed that there won't be any premium increase for the next period..."

Dissenting Voices

(Quotes from nonconcurring opinions in the blue ribbon panel's final report, *Catholic Herald* June 1998)

"The present incompetence of our health delivery system in respect to end of life care should not be corrected by legalized killing."

Brian F. Issell MD Director, Cancer Center of Hawaii

"I strongly believe in providing adequate medical treatment, which include pain relief and alleviation of suffering at the end of life, but I do not believe entrusting physicians with the authority to assist killing a person should be a part of the healing profession."

Naleen N. Andrade MD, Psychiatrist, Queen's Medical Center

"This is primarily an issue of social justice. Until we have taken away as many layers of social inequality as possible, have enhanced our practices of communication, and have broadened our understanding of death and dying, I believe the option for physician assisted suicide and death is too vulnerable to these inequalities."

Rev. Beth Donaldson, Kapaa United Church of Christ

"The very fact that physicians often have great

power and can exert substantial influence on the decisions of a patient require that much caution be exercised before recommending physician assisted suicide and death be legalized. I am not sure that Hawaii is ready to embrace the concept of physician assisted suicide and death as a form of medical practice.

James Pietsch Attorney Director, Elder Law Project

Miscellany

During my annual eye examination, I noticed a sign in my ophthalmologist's office stating that he was now affiliated with a prominent HMO. Throughout the checkup, I questioned him about the pros and cons of managed care.

When the exam was complete, the doctor handed my papers to a secretary and said, "Mr. Pripstein here is a member of our HMO."

"No, no," I corrected him. "I was just inquiring about HMOs. I don't belong to one."

"You don't?" he said with a laugh. "Well then, come back into the examining room and I'll take a look at your other eye!"

A policeman at the scene of a car accident was helping one of the drivers out of a damaged car and asked, "Are you seriously hurt?"

"How should I know?" the driver responded tartly, "I'm a doctor, not a lawyer."

Potpourri

A doctor, an engineer and a lawyer were arguing over whose profession was the oldest. "On the 6th day, God took one of Adam's ribs and created Eve," said the doctor. "So that makes him a surgeon first."

"Please," said the engineer. "Before that, God created the world from chaos and confusion, so he was first an engineer."

"Interesting," said the lawyer smugly, "but who do you think created the chaos and confusion?"

Question: "What's the difference between your first honeymoon and your second?"

Answer: "The first, Niagara; the second, Viagra."

Two Eulogies

Chew Mung Lum, age 76, was eulogized on January 5 at the Community Church of Honolulu: Chew Mung, physician athlete, scholar, beloved father, husband, and grandfather, who was adored by colleagues and patients alike had scribbled the following tenets on a notepad: "Nothing worth doing is completed in our life time...Therefore we must be saved by hope...Nothing true or beautiful or good makes complete sense in any immediate context of history; therefore we must be saved by faith...Nothing we do, however virtuous, can be accomplished alone; we are saved by love." Hope; faith; and love.

Herbert Suguru Takaki, age 97, was eulogized on January 14, at the Honpa Hongwanji by his long time golfing friends of the Mid Pac Country Club. Dick Omura was the master of ceremonies, Lionel Furukawa and Masaru Koike offered group incense and medical historian Mike Okihiro recalled Herbert's evolution: an immigrant youth from Haleiwa matriculating at McKinley High School, U of Chicago (where he was NCAA bantam wrestling champ for 3 years) and Rush Medical School and practicing medicine and surgery until age 86 before retiring. (Herb took up golf in his 60's and last shot his age at 91 at Mid Pac CC...which is all the more remarkable because he was blind in one eye, smoked six packs/d with endless cups of coffee and scoops of ice cream...Besides his mastery of judo and kendo, he had a voice that rivaled Caruso...How well do we remember.)

Health News Briefs

A Veterans Administration study released in November at the American Heart Association meeting in Dallas shows that gemfibrozil given to 1,264 men with low HDL (31.5) raised the HDL just two points, but after 5 years, only 17% of the patients had MI's compared to 21% of the patients on placebo.

About 10% of the people who took the diet drugs Redux and fen-phen had mildly leaky heart valves, and serious heart problems were rare according to a new analysis. Also, the latest evidence hints that the valve problems may gradually go away after stopping the drugs. At least 13 studies have looked into the problem. (Reports at the American Heart Association meetings in Dallas)

A Mayo Clinic study in Finland since 1995 of a margarine called Benecol (containing a plant stanol ester) lowered LDL 14%. The product is being introduced in the U.S. by McNeil Consumer Products and marketed under the name Benecol in January. Another margarine product called Take Control containing a cholesterol-lowering plant sterol will be introduced in February by Lipton.

Youth Elixir

Human growth hormone or hGH is being promoted as the latest youth elixir, although there's been too little research and the drug could be a risky, high priced snake oil. Dr. Adrienne Denese, a Manhattan Upper East Side rehabilitative therapist, has been taking the drug over a year and her "skin is flawless as porcelain and her body tight as a drum...She is over 40 and could easily pass for someone in her 20s."

The National Institute on Aging reported last year that too much hGH can result in diabetes, joint pain, high blood pressure and carpo tunnel syndrome and that there is no proof that any supplement works as an antiaging remedy. Until recently hGH was taken mainly for developmental disorders such as dwarfism. Dr. Huber Warner, acting associate director of the National Institute

of Aging's biology of aging program in Bethesda, Md says only a small study conducted in 1990 by Dr. Daniel Rudman showed potential benefits of hGH. "The study of 12 men aged 61 to 81 took hGH for six months and had increased muscle mass, a decrease in flab and tighter skin. Some of the men had breast enlargement." Proponents say moderate doses of hGH are safe. Klatz says his Academy was founded by a dozen doctors in 1993 and now has more than 4,000 member physicians in 37 countries.

Potpourri I

Joe suffered from excruciating headaches. The doctor told him only castration will cure his headaches. "You have a rare condition that causes pressure to build up against your spine" he explained. Joe was shocked, but had the operation.

When he left the hospital, Joe was depressed, so he stopped at a men's shop for a new suit. The salesman eyed him and said, "44 long?"

"That's right," Joe said. He tried the suit and it fit perfectly.

"How about a new shirt?" the salesman asked. "Let's see, a 34 sleeve and 16 1/2 neck ought to do it."

"Right again," Joe said. "You're simply amazing."

"While we're at it, how about new underwear?" the salesman suggested. He eyed Joe's waist and said, "Size 36."

"Nope, you finally missed one," Joe said, chuckling. "I wear size 34."

"You couldn't possibly," replied the salesman. "Underwear that tight would create a great deal of pressure against your spine and cause one hell of a headache."

Two guys were chatting at a cocktail party. "Your wife certainly brightens the room," one said to the other. "Her mere presence is electrifying."

"It ought to be," the other man replied. "Everything she's wearing is charged."

Conference Notes

"Minimally Invasive Cardiac Surgery" by Jeffrey Lee, Queen's Medical Center, Friday, December 11, 1998.

Introduction:

- PTCA: 434,000 in US/yr...25-30% restenosis within 6 mos; coronary stents improve results.
- CABG: c. 800,000 world wide/yr

CABG: Old & New: Traditional CABG

Minimal Invasive CABG:

- MIDCAB: LAD only;
- *OPCAD: All vessels with sternotomy...

Cost Comparison:

- PTCA (€ stent) (\$18,000-\$22,000)
- MIDCAB (\$13,000) "The beauty of MIDCAB's is its simplicity and safety."

Problems w CABG: 3.1% incidence of strokes;> Age 70: even higher incidence

Neurocognitive Dysfunction^{2°} cerebral microemboli with traditional CABG: (8 d = 70%; 8 wks = 40%; 1 yr = 30%)

Comparison OPCAB vs Traditional CABG: (May - Dec 28, 1998 SFH)

	OPACB	Traditional CABG
Intubation	3.2	8.8
LOS	4.7	6.3
Atrial Fib	38%	41%
Mortality	0	2/50
CXR	354	440

Intraoperative Transcranial Doppler Results (Microemboli to brain)

ASHD	PTCA	CABG	OPCAB	OPCAB
			I	II
1200	1600	1400	0	0

Hematological Problems: CABG>OPCAB

Red cell mass determines transfusion need.

RBC Mass = wtg x 7% = Hct

RCB Mass <1.8 >1.8

Transfused 83% 17%

No Transfusion 26% >4%

If RBC mass <1.8 liter → 56% transfused

If RBC mass >1.8 liter → 6.6% transfused

Early MIDCAB and OPCAB graft patency rates are equivalent to CABG patency rates.

*OPCAB = Off-Pump Coronary Artery Bypass

"Hyperlipidemia in Diabetes"

by Willa Hsueh, UCLA, January 5, 1999. Sponsored by Merck.

Diabetics have 2 to 4 times more risk factors...

Insulin Resistance or Cardiovascular Metabolic Syndrome (Former Syndrome X)

a. Insulin resistance b. Hyperinsulinemia

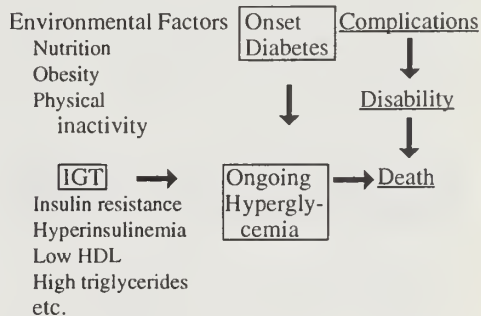
c. Low HDL d. High VLDL triglycerides

e. HTN f. Glucose Intolerance

g. Elevated PAI-1 h. Increased visceral fat

i. Hyperuricemia j. High small dense LDL

Genetic Susceptibility



LDL Level in Diabetics: ADA recommends LDL 100 (Since diabetics have 3 times more CHD, all diabetics should maintain LDL of 100 or less)

Target BP's (Results of 45 Study)

Hypertensives:	140/90
Diabetics:	130/85
Proteinurea:	120/75

ABCD Trial (Aborted) when incidence of MI's: 25 (Nisoldpin) vs 5 (Enalapril)

FACET Trial: Amlodipine (greater incidence of strokes and MI's) than Fosinopril

"Migraine Update" by VP Lawrence Neuman,
Queen's Medical Center, September 4, 1998

Epidemiology: Prevalence 23.4 x10⁶; female = 3x male; 18% of US females; 70 - 90% = familial. Diagnosed: 29% of males; 41% of females; undiagnosed 71% of males; 59% of females; "This disorder won't kill you, but...; Mis diagnosed as tension HA; "sinus HA" "It's all in your head..."

Pathophysiology: Vascular theory; Neural; Unified or Neurovascular; Serotonin (5-HT) Neurotransmission...

Diagnosis: Sy's & Sx's organic disease; extremely rare; sudden onset; new severe HA; Most severe HA experienced; progressively worsening HA; Onset with exertion, coughing, sexual activity (subarachnoid hemorrhage); Drowsiness, confusion, or memory loss.

*Sexual HA's: Treat with BB

Chronic malaise, myalgia, arthralgia

Fever

Progressive visual disturbance

Weakness, clumsiness

1st HA after age 50

*Migraine without aura is the common migraine.

Five Phases of Migraine: a. Prodrome b. Aura (only 10% have aura) c. HA d. HA termination e. Postdrome

Phase I (Prodrome) a. Hyper or hypoactivity (Heightened sensory perception) b. Irritability c. Depression d. Food craving e.g. for chocolates e. Repetitive, insomnia f. Fluid retention

Phase II (Aura) a. Scotoma b. Photophobia c. Visual distortion and hallucinations d. Fortification e. Drowsiness f. Unpleasant smells g. Scintillating scotoma (Most common)

Phase III (HA) a. 4-72hrs b. Throbbing c. Worsens with activity d. Frontal & temporal e. Edema f. N & V g. Scalp & pericranial tenderness h. Sensory perception i. Hibernation

Phase IV (HA Termination)

Phase V (Postdrome)

Common Precipitating Factors:

Menstruation	stress & worry
Oral contraceptives	certain foods
Glaring lights	lack of sleep
Exertion	change in weather
Fatigue	hunger

Ddx Migraine HA	vs	Tension HA
one side		both sides
vomiting		no vomiting
insomnia		no insomnia

Ddx	<u>Migraine</u>	vs	<u>Cluster HA</u>
	female		male
	25%		1%

Treatment Migraine

Myth: re treatment response

Fact: Always establish dx before Rx
Treatment response does not necessarily correlate with etiology of HA
Misdx may lead to fatality

Acute Medications in Symptomatic Migraine

Over the counter: Tylenol, ASA

Analgesics: barbiturates, analgesics, etc.

NSAIDS

Antiemetics, phenothiazines

Migraine Specific RX: Ergotamine tartrate; dihydroergotamine; Isomethergene; acetaminophen, dichloral phenazone; sumatriptan (Imitrex)

	<u>Onset</u>
Imitrex Injectable (6 mg)	10"
Imitrex Nasal Spray (20mg)	15-45"
Imitrex tabs (25mg)	60-90"

Colmitriptan

Naratriptan tab 1mg 2.5mg

Migrainal Pump Nasal Spray

Beta Blockers:

Inderal (Inderal LA) 40-320mg/d

Naldolol (Corgard) 40-240mg/d

CaCB

Tricyclics: Nortriptyline 10-150mg/d

Amitriptyline 10-30mg/d

SSRI's: Paxil esp irritable bowel syndrome

Anticonvulsants: Divaprox Na 500-300mg/d;

Sansert (Methysergide 2-8mg/d

Potpourri II

A panda walked into a restaurant and ordered a sandwich and a drink. When he finished, he pulled out a pistol and shot up the place scaring customers and breaking dishes, glasses and liquor bottles before turning to leave. Shocked, the manager said, "Hey, where are you going?"

The panda glanced back over his shoulder and said, "I'm a panda--look it up," before disappearing out the door.

The bartender pulled out a dictionary and found an entry for "panda." The definition read, "A tree dwelling animal of Asian origin characterized by distinct black-and-white markings. Eats shoots and leaves."

The boss called an employee into his office. "Bob," he said, "you have been with the company for a year. You started in the mail room, one week later you were promoted to a sales position, and one month after that you were promoted to district manager of the sales department. Just four short months later, you were promoted to vice president. Now it's time for me to retire and I want to make you the new president and CEO of the corporation. What do you say to that?"

"Thanks," said the employee.

"Thanks?" the boss replied. "Is that all you can say?"

"I guess not," the employee said, "Thanks, Dad."

Re Vitamin E

(From a Reader's Digest Article by Anita Bartholomew)

A. National Institute on Aging: (11,000 people age 65 and older on Vit E)

- a. 41% less risk of dying of heart disease
- b. 21% lower risk of dying from all causes.

B. Other Studies:

- a. Prevent atherosclerosis (fewer heart attacks and strokes)
- b. Limit damage from smoking
- c. Boost immune response
- d. Ease arthritic sy's
- e. Delay Alzheimers.

C. Vit E Boosts Immune System:

Tufts University study: 200 IU better than 60 IU and 800 IU

D. Vit E Cuts Cardiac Risk:

Dr. Ishwarlal Jialal of U of Texas Southwestern Medical Center studied 21 healthy people on 200 IU/d for 8 weeks and reported:

- a. Vit E reduced oxidation of LDL
- b. Vit E prevents atherosclerosis

E. Vit E Might Fight Cancer:

a. National Cancer Institute supported study of 29,000 adults in China:

One group on Vit E, Beta carotene and selenium showed significant reduction in cancer and cancer mortality.

b. 27,000 Finish smokers, ages 50 to 69 were on 50 IU vit E:

Reported 32% fewer prostate cancer and 41% fewer prostate cancer deaths Other studies are testing Vit E on colon, lung and breast cancer.

F. Vit E May Slow Alzheimer's.

a. A 2 yr study by the National Institute of Aging (341 people with moderate Alzheimer dementia) Research at 23 centers: Selegiline (a Parkinson's disease drug) or Vit E delay deterioration by 7 1/2 mos (compared to placebo)

G. Caution re Vit E: Safe for most people (up to 1000 IU's) but: Vit E, like ASA are blood thinners: Therefore don't take prior to surgery or if on anticoagulant drugs. Avoid with hypothyroidism or rheumatic heart disease.

Don't Sweat the Small Stuff

by Richard Carlson, Phd

Make peace with imperfections...

Let go of the idea that gentle relaxed people can't be super achievers...

Be aware of the snow ball effect of your thinking...

Remind yourself that when you die, your "In Basket" won't be empty...

Do something nice for someone else...And don't tell anyone about it...

Continued on Next Page, 3rd column

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Don't interrupt others or finish their sentences...

Let others have their glory...

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Let others be right most of the time...

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Surrender to the fact that life isn't fair...

Allow yourself to be bored...

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Once a week write a heartfelt letter...

Imagine yourself at your own funeral...

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For Sale.— Portable Gomco suction machine, with stand \$150, without \$120. I.V. pole \$30, Mayo stand \$50, extra tray \$20, oxygen cylinder with cart and meter \$175, Vernitron autoclave \$750, '91 Lexus LS 400 \$16,900. 671-5055 or 525-3600.

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Queen's Physicians Office Building I.— Prime location; P/T, F/T space available to share; Call 537-9595.

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The Best Thing Ever to Come Out of Religion was the Music.

J. James Rowsey, MD past chairman of the University of South Florida ophthalmology department is a true believer. During his six year tour as department chief he was in regular communication with the Heavenly Father. Nothing wrong with that, of course, except that Dr. Rowsey's fundamentalist Christian theology spilled over into his medical business. He started faculty meetings with a prayer, and gave lower evaluations to nonbelievers who arrived late. He hired "born-again" Christian doctors at higher salaries and provided them with better equipment and work space. He demoted or fired staffers who were not in his "religious camp". Some faculty members strongly believe that university officials knew about the matter, but kept Dr. Rowsey on board because of his fund-raising abilities. The university Director of Health Science Public Affairs did not contest that Dr. Rowsey's behavior was inappropriate (where have I heard that word before?), but claimed the issue is more complicated, and further stated that the school had to be careful not to tread on the doctor's First Amendment rights. He claimed that no solid evidence showed that religious discrimination took place. Nevertheless the university settled one doctor's claim for violation of civil rights to the tune of \$125,000, and two similar suits are pending. Dr. Rowsey stepped down as chair in October 1997, but has tenure so dismissal is practically out of the question.

Youth Thinks Nothing of Health, and Age Thinks of Nothing but.

The latest issue of Ophthalmology reported that among 750 patients with cataracts, those who took vitamin E cut the further development of cataract by 50%. An accumulation of scientific data reveals that vitamin E may be that magical fountain Ponce De Leon was searching for. It reduces the risk of developing heart disease, minimizes skin damage like scarring, sunburn, and liver spots. It appears to improve athletic and sexual performance, increases lung capacity, and also may diminish memory loss due to aging. A report in the Journal of National Cancer Institute found that taking 75 international units per day reduced the risk of dying from prostate cancer by 41%. A JAMA study published last year found that when healthy older adults took 300 IU a day for four months they had a two-thirds boost in immune function. A 10 year study by the National Institute on Aging found that among 11,000 subjects over the age of 67, those who took vitamin E cut the risk of dying from any cause by one-third!

Peer Review is Confidential — Expect When the Court Says it Isn't...

A woman with a ruptured ectopic pregnancy was initially examined by the emergency room nurse. She failed to recognize the seriousness of the problem, and did not alert the ER physician. Due to the delay, the patient died. The hospital's peer review mechanism evaluated the event, and disciplined the nurse. The State Board of Nursing investigated the case, obtained hospital documents, and charged the nurse with professional incompetence. The family filed a lawsuit charging the nurse with negligence, and when the plaintiffs' attorneys subpoenaed the Board's files, they were given copies of the hospital documents. The hospital claimed their forms were protected under the law regarding peer review, and the district court agreed. However, on appeal the Supreme Court overruled that decision, stating "forms and documents containing factual accounts and witnesses' names are not protected simply because they also contained the peer reviewer's conclusions."

A Hypocrite is a Person Who.....But Who Isn't?

For almost 20 years, NBC's Today Show featured Dr. Art Ulene, USC School of Medicine obstetrician and gynecologist. He offered on-the-air medical advice and became one of America's most recognized and trusted physicians. In times past he advised against vitamin supplements on the Today Show, stating that research didn't justify taking them. But now the trusted doctor has seen the light. Departing the NBC show months ago, he is now seen in national television spots coming on with a message that sounds like a public service announcement. "Medical Research" has proved him wrong, and he is pitching his own line of

vitamin supplements, such as Dr. Art Ulene's Optimal Formula! for Women. Many medical educators are angry, stating that it's a tremendous conflict of interest, and that he now sounds more like an advertising agency person. Dr. Ulene sees no conflict, but happily says his product line is now in 23,000 stores and selling so well that his company plans to launch other lines of Dr. Ulene nutritional products.

What this Country Needs is a Good Five Cent Cigar Extinguisher.

In the town of Sete, France, a multidisciplinary study involving epidemiologists, ophthalmologists, and biologists was conducted on 2,584 residents age 60 years and beyond. After adjustment for age, gender, cardiac disease and diabetes, current smokers had a 3.6 fold increased risk of late age related macular degeneration (AMD) compared to nonsmokers. Former smokers had a 3.2 times increased risk. Phillip Morris, R.J. Reynolds, Brown and Williamson, P. Lorillard, and their friends in the scandalous tobacco combine, drive one more stake into the heart of good health. And now, trendy magazines and television shows have attractive young people, especially beautiful women, puffing on havanas and claros. Another disturbing part is that the recent acceptance of the damage settlement with various state governments does not come near the costs incurred in caring for patients with the multiple medical problems directly attributable to the noxious weed. Despite the overwhelming evidence and the immense cost to patients and families in coin and emotion, state attorneys general opted for a quick buck. After all, to actually bring the complaint would involve work. The tobacco companies got away cheaply, displayed no remorse, and will continue their disgraceful promotional activities.

People Shouldn't Complain About the Cost of Medicine: Even the Latest Wonder Drug Costs no More Than the Cheapest Lexus...

As every physician knows, many elderly patients have monthly drug bills of several hundred dollars, while members of some plans pay much less. To address this dichotomy, Representative Tom Allen of Maine introduced a bill in late September which asks Congress to give Medicare recipients the same discounts on prescription drugs which are currently afforded to "favored customers," of the drug industry, which includes members of big HMO organizations and federal government agencies. The favored companies get discounts of as much as 60%, which means that outsiders pay twice as much for their prescriptions. The pharmaceutical houses let out a collective scream, and have mounted a massive lobbying blitz to kill this bill. They fear that the public is becoming increasingly outraged at high drug prices, and claim they would lose the revenue needed for research. The bill would cost taxpayers nothing. Merck's lobbyist has called on both Democrats and Republicans to kill the bill, saying "It does not deal with providing coverage or quality of care. Seniors need a proposal that provides coverage and improves care." In other words, make the taxpayers balance the issue, and let the drug industry continue to harvest their huge profits.


Y2K, A Clever Way to Say AAUGH!!

The House Government Reform and Oversight Committee evaluated the Health Care Financing Administration regarding computer readiness for the year 2000. HCFA was given an "F," and the agency requested \$141 million to remedy the failure. In the meantime HCFA decided to delay proposed Medicare payment changes to ambulatory surgical centers until after the year 2000 as potential protection against the SNAFU. If the agency fails to head off the computer glitch, Medicare reimbursement could drop 100% in about one year.

Addenda

- ❖ Otters can get herpes.
- ❖ 46% of Americans say they're being left behind by "technology."
- ❖ In 1920, the average check at a diner was \$0.28.
- ❖ Cowhand -- an orthopedic malady common among dairy farmers.

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ALL OUR PORTFOLIO MANAGERS
THINK ABOUT IS
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'Iolani Palace

The only royal palace in the United States was built for King Kalakaua in 1882.



Editorial

Norman Goldstein MD
Editor, Hawaii Medical Journal

"Medical Futility in the Critically Ill Patient" and "CAM"

Dr. Louis L. Low and Dr. Larry J. Kaufman presented a provocative report on "Medical Futility in the Critically Ill Patient" at the 1998 Medical-Legal Seminar in Singapore. We publish their paper to stimulate discussion on this increasing problem in medicine.

The manuscript by Carolyn C. Gotay, PhD and her associates on "Use of Complementary and Alternative Medicine in Hawaii Cancer Patients" serves as an excellent follow-up to the review on Complementary and Alternative Medicine (CAM) by Janet Onapa MD, which appeared in last month's issue of the Journal.¹

Complementary medicine is emerging as a new frontier in medicine - using some very old medicines and techniques. Complementary Medicine for the Physician (CMP) published by Churchill Livingston, has entered its 4th year of newsletters on CAM.²

Complementary & Alternative Medicine has even made entry into the Dermatology literature; a special issue of the Archives of Dermatology on Alternative Medicine and Dermatology - the Unconventional Issue - was published in November 1998.³ Hot off the press, Clinics in Dermatology Complementary Medicine, Part I,⁴ was published in November / December 1998 by Elsevier.

The complete physician in any field must be aware of the alternatives in medicine today. We are fortunate here in Hawaii to have excellent resources for CAM in practice as well as in teaching programs in our Medical School.

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Special Guest Editorial

Jerome P. Kassirer MD,
Editor, New England Journal of Medicine

"Should Medical Journals Try to Influence Political Debates?"

When Dr. E. Ratcliffe Anderson, the American Medical Association's executive vice president, announced on January 15, 1999, that he had fired the editor-in-chief of the *Journal of the American Medical Association* (JAMA), he said that an important factor in his decision was the publication of a research article on the

sexual attitudes of college students. It was not just the content of the article that was at issue, he said, but the fact that the article had been advanced for publication ahead of schedule with the intent of influencing a major political debate. In this case, the issue studied was whether people consider oral-genital contact to be "having sex."

Setting aside the quality and value of this study, is advancing publication of an article with the goal of influencing political events a valid rationale for firing the editor of JAMA? I think not. In my view, a medical journal should not be a dusty archive of clinical studies and review articles, but a lively forum for exposure and discussion of important issues that involve, even indirectly health and medicine. Articles on ethics, legal issues, health policy human rights, and health economics published in a respected medical journal can have a bearing on ongoing political decision making at the state, national, and international level. Because of the enormous range of issues that are brought to the attention of medical editors daily, they have a unique opportunity to contribute to such debates.

In selecting articles for publication, journal editors do not simply run through a queue of accepted manuscripts in the chronologic order of their acceptance. Some manuscripts are solicited with the very intention of informing debates. Our series of health policy articles in 1992 and 1993 was scheduled to coincide with the national debate on health care reform, and our Legal Issues in Medicine section is often timed to shed light on important legal debates. Sometimes we can time the publication of unsolicited manuscripts as well. We have an established policy of expediting the handling of scientific manuscripts when we believe they contain information that maybe critical to public health,^{1,2} and we move other types of manuscripts forward when we think they may have an impact on public policy.

From time to time I have put editorials on issues about which I held strong opinions on a fast track. Two years ago, when voters in California and Arizona approved propositions allowing their physicians to prescribe marijuana for medical indications and Janet Reno, the attorney general, announced that the federal government would punish physicians if they did so, I wrote an editorial critical of the government.³ Our usual interval between the submission of an editorial and its publication is four to six weeks. In this instance, I wrote the piece over a weekend and it was published 17 days later; when the debate was still active. Last spring, when some members of Congress impetuously drafted bills that would have put an end to all cloning experiments that use human cells, Nadia Rosenthal (our consultant in molecular medicine) and I wrote a dissenting opinion that was published well in time to join the debate.⁴ My editorial criticizing Congress for essentially practicing medicine is still another example.⁵

Editorials are not the only type of article that we have put on a fast track in order to be topical. In 1993 we rushed into print a Special Report on starvation in Somalia.⁶ In the same year, as part of the national debate on the Clinton health care plan, we expedited the publication of several reports and opinion pieces on health care reform.^{7,11} Some were published within four weeks of submission. In 1997 we accelerated the publication of one Sounding Board article that dealt with the impending tobacco settlement¹² and another¹³ that disagreed with a controversial editorial by one of our editors.¹⁴ We now have a mechanism by which an article or editorial in our end section (the section that follows the masthead) can be published

within a few weeks. However, because our function is different from that of a newspaper, magazine, or television news show, we expect to use this mechanism only infrequently.

Editors should be sufficiently humble to appreciate that what we write or publish may have limited influence on political debates. Usually, we have little idea of the effect. Nonetheless, I believe that medical editors have an obligation to publish not only articles that are well reasoned, informative, and carefully reviewed, but also ones that are sufficiently timely to contribute to the development of public policy. Expediting a review and advancing the date of publication of a study or opinion piece is often justified. Firing an editor for doing so is an irrational decision and an ominous precedent.

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Editorial Note:

Thank you Dr. Kassirer for another "right on" editorial. I agree with you completely. Mahalo for permission to reprint your editorial in our journal -- the only other peer reviewed medical journal in the U.S.

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Medical School Hotline

Family Medicine In Hawaii

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Introduction

The medical specialty of Family Medicine has evolved in Hawaii in response to the changing health care demands and changing public health concerns in the state. During the last 30 years, significant changes have occurred in Hawaii's population structure, demography, morbidity/mortality patterns, and health economics which have generated a new set of health care concerns. Hawaii requires a contemporary paradigm of health care delivery to keep pace with the emergence of different illness and disease patterns, and the increasing demand of individuals for an integrated approach to one's health care. The discipline of Family Medicine is uniquely positioned to work with the present family care delivery system to develop, and transition into, an appropriate paradigm for health care delivery in Hawaii.

Hawaii has traditionally been a medical specialist oriented state. Most people in the state, including physicians, do not understand what family medicine is and what the family practitioner does. A brief history of the development of family medicine would be helpful. Physicians were all generalists at the advent of the modern era of medicine. As technology and medical procedures evolved, specialties such as surgery, obstetrics, and radiology came into being. As a greater understanding of the human life cycle developed, medical expertise was divided by age groups (pediatrics, internal medicine, geriatrics). Subsequently expertise in specific body systems evolved and specialties such as cardiology, hematology, neurology, psychiatry came into existence.

Family medicine grew out of a realization that effective medical care should be carried out through integrating not only the vast knowledge required for medical diagnosis and therapeutics but also life cycles, body system and technology. The human body, mind, and environment operate in an interdependent fashion and an artificial separation into areas of medical expertise did not serve patients and families well. Hence, the generalist was reborn, however, as a more highly trained practitioner of medicine called a Family Medicine physician or family practitioner.⁶

The delivery of health care in the Family Medicine environment is performed utilizing the science of medicine (biomedical model) in context of the family, social, and cultural background of the patient (biopsychosocial model). This delivery is provided in a longitudinal fashion in the patient's environment, with consultation of home and community environments. Family physicians are trained in this new paradigm of health care delivery which acknowledges that the predominant determinants of the individual's health care are not only biological or psychological, they are familial, cultural, environmental, and social.⁶

Hawaii has several unique demographic and cultural aspects which makes health care delivery challenging and difficult. Access to adequate health care by the indigent and those living in the rural areas of Hawaii remains problematic. The health care system is often not

sensitive or cognizant of the specific health care needs of various cultural groups residing in Hawaii. The Kanaka Maoli (Native Hawaiians), Samoans, Vietnamese, Filipinos, Micronesian communities are growing and all have disproportionate burdens of illness.

The Kanaka Maoli (Native Hawaiians) have significantly higher rates of diabetes and breast cancer than the other ethnic groups in Hawaii. Their longevity is shorter, poverty levels are higher, and morbidity patterns are significantly worse even if socio-economic status is taken into account.^{1,7} In our neighboring U.S. associated Pacific Countries (Republic of the Marshall Islands (RMI) the Federated States of Micronesia, American Samoa, and the Republic of Belau), the health status of the people is dire. In RMI, for example, the infant mortality rate is 7 times that the U.S. and the adult longevity is 18 years less than that of the average American living in the United States. There is a significant dependence by these Pacific jurisdictions on Hawaii's health care system.^{2,3,8}

Examination of Hawaii's social and public health indicators reveal that: tuberculosis rates are 2 1/2 times that of the United States, Hawaii has the 8th highest infant mortality in the U.S., 3rd highest rate of teen deaths by accidents, 3rd highest high school drop out rate, 11th highest rate for children in poverty, the highest rate of single parent families. Hawaii's has an aging population which is 2 1/2 times that of the U.S. Interestingly, there are only 9 states in the U.S. which have fewer family physicians per 100,000 population than Hawaii.^{4,5}

In response to the health care needs of the state, the John A. Burns School of Medicine (JABSOM) developed a Department of Family Medicine and Community Health. Additionally, Wahiwa General Hospital (WGH) developed a Family Medicine Residency Program (FMRP) in association with JABSOM. The mission of JABSOM and the WGH FMRP is to train physicians to provide onsite care for the peoples of rural Hawaii and the Pacific.

Before the FMRP began, only 1-2 of 55 JABSOM graduates would enter family medicine training programs. Presently 14-17 or 25% of the JABSOM graduating class enter FP residency training programs. Hawaii's FMRP actively selects and train physicians who are Kanaka Maoli, Micronesians, Samoans, Filipino, Vietnamese, and those with known interests in serving the Kanaka Maoli and disenfranchised populations of Hawaii. The program is new, graduating 16 family practitioners to date. Thirteen of the 16 have settled in rural areas of Hawaii, practice on the neighbor islands of Hawaii, or have been retained as junior faculty. Two graduates, are Kanaka Maoli and work with the native Hawaiian Health Systems on Moloka'i and Maui. There are 3 residents of Kanaka Maoli descent in the present residency class—one of whom is committed to practicing on Molokai and another who will practice in Waianae. One graduate was of Chamorro descent, and one resident is the second U.S. trained Marshallese physician, who will be returning to practice in the RMI.

The FMRP infrastructure was designed to carry its mission. The faculty are familiar with Kanaka Maoli health issues, psychosocial medicine, rural medicine, the Pacific Basin, and working with disenfranchised people. Two of seven faculty members were born and raised in Wahiawa/Mililani, two are from Hawaii ethnic minority groups, one faculty member lived in Saipan for four years and subsequently worked at Kokua Kalihi Valley for three years, another was the medical director of preventive services and public health in the RMI for 9 years, and yet another worked for 7 years in a medically underserved people in a community health center environment prior to becoming faculty. There is a full-time staff behaviorist to develop behavioral/psychosocial curricula. A faculty member has written a book on cross-cultural health care in Hawaii. The faculty have consulted with Kanaka Maoli health issues, including working with Papa Ola Lokahi, health care projects on

Moloka'i, and examining the impact of the paucity of Kanaka Maoli physicians in Hawaii.

In order to emphasize rural health care, the FPRP is based at WGH, a community based/rural institution. Additionally, the residency has program teaching sites at Hilo, Waimanalo, Hana, and the North Shore of Oahu. Recently the FPRP developed and staffs a continuity clinic in the RMI to care for its radiation affected people through a five year contract with the U.S. Department of Energy. The FRP residents have also completed training electives in Republic of Belau, American Samoa, Fiji, and Kiribati.

The family practitioner learns the rigorous methods of the science of medicine (biomedical model) as well as the delivery of care to the patients' psychological, sociological, familial, and cultural environments (biopsychosocial model). It is the only specialty that has effectively integrated a biopsychosocial model of health care delivery with the biomedical model.

Biomedical training includes learning about treating health care needs during all parts of the life cycle, and in an integrated fashion with all body systems. The FMRP also develops a physician's ability to assess the impact of his or her practice of medicine on the community served. This is done through instituting curricula to perform Community Oriented Primary Care Research (COPC). The training methods of the FMRP are unique and develop physicians who are able to meet the health care dilemmas of Hawaii and the Pacific.

Conclusion

Health care delivery strategies by physicians in Hawaii need change to positively affect health care outcomes. The utilization of a biopsychosocial model by practitioners of health should be an integral part of physician training. Training new physicians to deal with Kanaka Maoli health issues, caring for disenfranchised populations and rural populations is a priority. Family Medicine and the Family Medicine Residency are key elements to making this change.

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Patient Privacy and Confidentiality

At the 1998 HMA House of Delegates meeting, Resolution 7 introduced by E. Blossom Wang MD was passed directing the publication of materials relating to patient privacy and confidentiality. This issue is an agenda item for the 1999 Hawaii State Legislature. Note: Only portions of documents reprinted here, resulting in missing numbered sections.

Resolution 7

RESOLVED, The Hawaii Medical Association follow the recommendation of the AMA Board of Trustees report to read and review the Massachusetts Policy on Patient Privacy and Confidentiality as adopted by the Massachusetts Medical Society House of Delegates November 8, 1996; to have a copy of the Policy In Entirety available for reference and resource when considering formulating HMA policy on medical privacy issues such as but not limited to proposing or reviewing legislation, reviewing insurance contracts, representing the HMA on task forces, etc. and to publish the website address of the full report in the HMA Journal (<http://www.massmed.org/physicians/pubs/privacy.html>) to print in the HMA Journal a copy of the Statement of Principles from the Massachusetts Medical Society's Policy on Patient Privacy and Confidentiality which forms Appendix A pages 17, 18, 19, 20 and 21 of AMA President Elect Thomas Reardon, MD's AMA Board of Trustees Report 9 A-98 of June 30, 1998 and which is reproduced below:

Appendix A

Policy on Patient Privacy and Confidentiality
as adopted by the Massachusetts Medical Society House of Delegates
November 8, 1996

Statement of Principles

General Principles

1. The patient has a fundamental right to privacy and confidentiality in his/her relationship with a physician. It is the physician's responsibility to do his/her best to protect the patient's privacy and confidentiality.

Patient-physician relationships should be governed by mutual trust, respect, courtesy, honesty, and confidentiality.

2. Privacy and confidentiality are the privileges of the patient, so only he or she may waive them, in a meaningful and non-coerced fashion.

Release of information for a specific purpose such as insurance payment should not require waiver of the total right to privacy and confidentiality.

3. An individual's rights to privacy and confidentiality should not be compromised. Statutory and regulatory exceptions should be specific and narrowly defined.
4. Conflicts between a patient's right to privacy and a third party's need to know should be resolved in favor of the patient's privacy and confidentiality except where that may result in serious harm to the patient or others.

5. The development and acceptance of new information technologies should include measures that strengthen, not jeopardize, patient privacy and confidentiality.
6. Physicians have an ethical responsibility to understand issues of privacy and confidentiality, educate their staffs, and make reasonable efforts to inform their patients of these issues.

Principles Pertaining to Confidentiality of Medical Information in Health Insurance

1. Physician participation in an insurance plan must not be contingent upon the physician's agreement to release medical records for various insurance company purposes, without meaningful patient consent.
2. A subscriber's ability to obtain health insurance must not be contingent upon the subscriber's agreement to a broad and indefinite consent for disclosure. A subscriber should not be required to consent to the disclosure of medical information for other adults enrolled in the plan as the subscriber's dependents or family members. The amount of information that an individual must disclose in order to qualify for health insurance benefits and payment must be strictly defined and limited.
3. Every insurer should formally disclose in writing to each individual adult covered by the health plan the insurer's specific policies and procedures for accessing confidential patient information, including the uses for which medical information is sought and the numbers and functions of persons who have access to it. This written information should be supplied at least annually.
4. Insurers should limit the scope of medical information to that which is absolutely necessary to complete the particular function, and should not seek to obtain the whole medical record. Information obtained for one purpose should not be used for other purposes.
5. Only completed disidentified patient information should be used to perform insurance panel credentialing, quality assurance monitoring and routine utilization review.
6. Each time medical information is sought, the insurer should obtain the individual patient's written consent, which must specify:
 - a) the precise scope of the information requested, with clinical information limited to what is absolutely necessary to perform the particular function.
 - b) the specific purpose for which the information is sought.
 - c) the name of the recipient(s) of the information. If the recipient is an institution, the functions of the persons who will have access to it should be specified.
 - d) whether the information needed is identified or disidentified information. If disidentified information is appropriate it should be done by the physician's office prior to its release.
 - e) that the patient has the right to review the information requested prior

- to any disclosure, whether the information is identified or disidentified.
- f) where and how the information will be stored and when it will be destroyed.
 - g) the identities of any secondary data processing companies that are receiving their medical information.
 - h) the consequences of withholding or limiting consent, and specific instructions as to the appeal process.
7. Insurers shall adopt and enforce prohibitions on redisclosure or reuse of medical information for secondary purposes, even within the insurance company or payer itself.
 8. Physicians have the right to remove sensitive information before submitting medical information to the insurer, or to provide a summary of the record. This should include any information pertaining to persons other than the patient.
 9. Patient specific utilization review and eligibility determinations should be performed by a peer reviewer and only the reviewer (not the payer) should have access to the clinical information necessary for review. This information should have the name of the patient and other obvious identifiers removed for the purposes of review.
 10. Any disclosure of information must be traceable for both electronic and paper records.
 11. There is an increased threat to privacy and confidentiality when providers and payers merge. Hence, further protections are necessary to prevent access to medical information for administrative purposes.
 12. There should be enforced time lines for the destruction of medical information. Medical information should not be warehoused by insurance companies.
 6. Physicians should be educated about technologies of security.
 7. In systems of electronic medical records, patients, in consultation with their physician, should be able to specify what information should not be disseminated.
 8. While offering potential clinical and research benefits, systems designed to encourage data linkage though the mandatory use of unique health identifies or standard code sets may jeopardize patient privacy and should require patient consent.
 9. Patient-specific information should not be released to data clearing houses without meaningful notice to and consent of the patient, and assurance of privacy and confidentiality.
 10. Other organizations concerned with the development of electronic medical records should be encouraged to pursue research, development and education in matters related to privacy and confidentiality.
 11. Firm, explicit state and federal statutes should regulate access to identified confidential electronic patient data and define punitive measures for negligence and deliberate violation of security measures.

Principles Pertaining to Information Technology and Electronics Medical Records

1. Electronic medical records offer an opportunity for dramatic benefits to patients in clinical care, research and the delivery of health care. However, electronic records will not be capable of providing these benefits unless patient privacy and confidentiality are strengthened, not jeopardized, by new policy governing information technologies.
2. Regarding the electronic record, as with the paper record, the patient has the right to privacy and confidentiality of his/her personally identified medical information.
3. Within the clinical setting all those directly involved in the treatment should obtain access to the record through the attending physician according so the consent of the patient.
4. For any individual or organizations with authorized access to the electronic medical record, the level of access permitted should be specifically identified in advance. Full disclosure of this information to the patient is necessary.
5. Patient data should be assigned security protections that should be used to control who has access to the information. In addition, mandatory audit trails to determine who has accessed the electronic record should be maintained and made available to the attending physician, and to the patient upon the patient's request.

Principles Pertaining to Public Health

1. As is current practice, public health information should continue to be collected only on a disease or condition-specific basis, and should be protected from redisclosure.

Principles Pertaining to Research

1. Clinical research is essential to the advancement of medicine. Without privacy and confidentiality, patients will not reveal and physicians will not record accurate information necessary for clinical care or research. Therefore, medical information used for research, including public health research, should be disidentified at the source, unless the patient voluntarily and expressly consents to the use of his/her personally identifiable information. An institutional review board that conforms to federal standards may permit the release of limited patient-specific information to the research for clinical research purposes.
2. Whenever personally identifiable medical information is used in research, patient privacy and confidentiality should be protected and the further disclosure of information should be prohibited.

Principles Pertaining to Public Safety

1. In the interest of public safety, law enforcement officials may access medical records by court order specifying: the particular individual, the specific and limited portion of the medical record requested, that good cause was shown that the public's safety necessitates the access, that

there is no other non-confidential source for the information, and that it will be viewed but not retained in the law enforcement file beyond the immediate reason for which it is sought.

Principles Pertaining to Marketing and Commercial Use

1. Patient medical information, whether identified or disidentified, should not be a commodity in the marketplace, and should not be made available for purchase or sale by any individual or entity.
2. Even the most general patient information should not be disclosed to vendors or others for marketing purposes without the patient's written informed consent.

Resolution 7 (continued)

and be it further

RESOLVED, The Hawaii Medical Association, except where superseded by HMA written policy, reaffirm its commitment to abide by: the American Medical Associations Code of Ethics including the Principles of Medical Ethics; the Fundamental Elements of the Patient-Physician Relationship; the Current Opinions of the Council on Ethical and Judicial Affairs and updates as they occur; the current edition and updates as they occur of the Policy Compendium of the AMA which is a source of reliable information on existing AMA Policies, ethical opinions, and bylaws and which is available in the HMA office; and the Reports of the Council on Ethical and Judicial Affairs and the three key principles adopted by the AMA Board of Trustees regarding the confidentiality of medical information, and the above printed statements of the House of Delegates; and be it further

RESOLVED, HMA refer to the above documents and verify consistency between our national AMA policy and our local HMA policy whenever appropriate such as: when making HMA policy on medical privacy and confidentiality, when proposing or reviewing legislation, when sitting on a task force for patient privacy and confidentiality, when reviewing contracts of physicians with insurers, hospitals or other third parties, when asked to intervene or express an opinion re medical privacy and confidentiality etc.; and be it further

RESOLVED, That the HMA publish in the HMA journal the following relevant statements or AMA Opinions and policies noting that those which begin with the letter E come from the Council on Ethical and Judicial Affairs and those which begin with the letter H are from the House of Delegates:

PRINCIPLES OF MEDICAL ETHICS

Preamble:

The medical profession has long subscribed to a body of ethical statements developed primarily for the benefit of the patient. As a member of this profession, a physician must recognize responsibility not only to patients, but also to society, to other health professionals, and to self.

IV. A physician shall respect the rights of patients, of colleagues, and of other health professionals, and shall safeguard patient confidences within the constraints of the law.

Fundamental Elements of the Patient-Physician Relationship

From ancient times, physicians have recognized that the health and well-being of patients depends upon a collaborative effort between physician and patient. Patients share with physicians the responsibility for their own health care. The patient-physician relationship is of greatest benefit to patients when they bring medical problems to the attention of their physicians in a timely fashion, provide information about their medical condition to the best of their ability, and work with their physicians in a mutually respectful alliance. Physicians can best contribute to this alliance by serving as their patients' advocate and by fostering these rights:

4. The patient has the right to confidentiality. The physician should not reveal confidential communications or information without the consent of the patient, unless provided for by law or by the need to protect the welfare of the individual or the public interest.

In response to intensified federal legislative efforts, and building on previously enunciated ethical principles, the AMA Board of Trustees adopted the following key principles by which to evaluate any proposal regarding the confidentiality of medical information:

- 1) That there exists a basic right of patients to privacy of their medical information and records, and that this right should be explicitly acknowledged;
- 2) That patients' privacy should be honored unless waived by the patient in a meaningful way (i.e., informed, noncoercive) or in rare instances of strongly countervailing public interest; and
- 3) That information disclosed should be limited to that information, portion of the medical record, or abstract necessary to fulfill the immediate and specific purpose.

The duty of confidentiality constitutes an integral part of professional ethics, and is featured in virtually every oath of medicine, most prominently the Hippocratic Oath: "What I may see or hear in the course of treatment...which on no account one must spread abroad, I will keep to myself, holding such things shameful to be spoken about." This pledge is embodied in the Principles of Medical Ethics, the Fundamental elements of Patient-Physician Relationship, and Opinion 5.05, "Confidentiality," in the AMA Code of Medical Ethics. Confidentiality is critical in health care because it is a vital prerequisite for trust and honesty in the patient-physician relationship; it allows patients to seek medical care and disclose sensitive details openly with their physicians without fear of consequences.

E-1.00 Introduction

E-1.01 Terminology. The term "ethical" is used in opinions of the Council on Ethical and Judicial Affairs to refer to matters involving (1) moral principles or practices and (2) matters of social policy involving issues of morality in the practice of medicine. The term "unethical" is used to refer to professional conduct which fails to conform to these moral standards or policies.

Many of the Council's opinions lay out specific duties and obliga-

tions for physicians. Violation of these principles and opinions represents unethical conduct and may justify disciplinary action such as censure, suspension, or expulsion from medical society membership. Issued prior to April 1977; Updated June 1996.

E-1.02 The Relation of Law and Ethics. The following statements are intended to clarify the relationship between law and ethics.

Ethical values and legal principles are usually closely related, but ethical obligations typically exceed legal duties. In some cases, the law mandates unethical conduct. In general, when physicians believe a law is unjust, they should work to change the law. In exceptional circumstances of unjust laws, ethical responsibilities should supersede legal obligations.

The fact that a physician charged with allegedly illegal conduct is acquitted or exonerated in civil or criminal proceedings does not necessarily mean that the physician acted ethically. Issued prior to April 1997; Updated June 1994.

E-5.05 Confidentiality. The information disclosed to a physician during the course of the relationship between physician and patient is confidential to the greatest possible degree. The patient should feel free to make a full disclosure of information to the physician in order that the physician may most effectively provide needed services. The patient should be able to make this disclosure with the knowledge that the physician will respect the confidential nature of the communication. The physician should not reveal confidential communications or information without the express consent of the patient, unless required to do so by law.

The obligation to safeguard patient confidences is subject to certain exceptions which are ethically and legally justified because of overriding social considerations. Where a patient threatens to inflict serious bodily harm to another person or to him or herself and there is a reasonable probability that the patient may carry out the threat, the physician should take reasonable precautions for the protection of the intended victim, including notification of law enforcement authorities. Also, communicable diseases, gun shot and knife wounds should be reported as required by applicable statutes or ordinances. Issued December 1983; Updated June 1994. (IV)

E-5.08 Confidentiality: Insurance Company Representative. History, diagnosis, prognosis, and the like acquired during the patient-physician relationship may be disclosed to an insurance company representative only if the patient or a lawful representative has consented to the disclosure. A physician's responsibilities to patients are not limited to the actual practice of medicine. These services might include certification that the patient was under the physician's care and comment on the diagnosis and therapy in the particular case. See also Opinion E-2.135. Issued prior to April 1977. (IV)

H-140.989 Informed Consent and Decision-Making in Health Care:

(4) Conflicts between a patient's right to privacy and a third party's need to know should be resolved in favor of patient privacy, except where that would result in serious health hazard or harm to the patient or others.

(5) Holders of health record information should be held responsible for reasonable security measures through their respective licensing laws. Third parties that are granted access to patient health care information should be held responsible for reasonable security measures and should be subject to sanctions when confidentiality is breached.

(6) A patient should have access to the information in his or her health record, except for that information which, in the opinion of the health care professional, would cause harm to the patient or to other people.

H-190.996 Employers' Violation of Patient Privacy with Group Medical Insurance Claim Forms:

The AMA urges employers and health insurance companies to adopt policies and practices that preserve employee confidentiality of medical information, including medical claims information, in the workplace. Further, the AMA is aware that employees' and job applicants' medical information may be inappropriately shared with employers in other, more subtle ways and that such information could provide the basis for employer discrimination. The AMA will continue to monitor such reports, and other sources of relevant information and take appropriate action, as needed. (CMS Rep. K, A-86; Amended by Sunset Report, I-96; Amended: sub. Res. 116, I-97)

H-315.986 Confidentiality of Patient Records: Our AMA opposes the concept that filing a claim for medical insurance coverage constitutes a blanket waiver of a patient's right to confidentiality of his/her medical records for all purposes. The AMA will engage in a major initiative to educate patients about the implications and consequences of blanket medical records releases, and educate patients about the need for possible legislative modifications. (Res. 243, I-94; Appended: Res. 231, I-97)

H-315.987 Limited Access to Medical Records: The AMA will pursue the adoption of federal legislation and regulations that will: limit third party payors' random access to patient records unrelated to required quality assurance activities; limit third party payors' access to medical records to only that portion of the record (or only an abstract of the patient's records) necessary to evaluate for reimbursement purposes; require that requests for information and completion of forms be delineated and case specific; allow a summary of pertinent information relative to any inquiry into a patient's medical record be provided in lieu of a full copy of the records (except in instances of litigation where the records would be discoverable); and provide proper compensation for the time and skill spent by physicians and others in preparing and completing forms or summaries pertaining to patient records. (Sub. Res. 222, I-94)

H-315.990 Confidentiality of Computerized Patient Records: The AMA (1) reaffirms the importance of confidentiality of patient records regardless of the form in which they are stored;

H-315.992 Copying Records for Audits: The AMA supports taking appropriate action to ensure that the financial responsibility for producing or copying patient records at the request of any regulatory agency having the authority to do so shall be borne entirely by the requesting agency and the request for said records shall be made at least 30 days in advance of any deadline. (Res. 75, A-91)

H-320.967 Insurance Company Requests for Patient Information. It is the policy of the AMA to study the issue of insurance company demands for unlimited access to patient records and to recommend guidelines for disclosure of information contained in a patient's medical records to insurance companies; (2) to work with the insurance industry to ensure insurance company acceptance of and compliance with AMA guidelines for release of patient records; (3) to work to ensure that physicians are compensated for their costs of retrieving and providing these records; and (4) that while awaiting the development of more detailed guidelines at some future date, requests made to physicians or hospitals for information must be time- and illness-specific so as to avoid compromising patient confidentiality. (Sub. Res. 106, I-91)

H-320-979 Potential Breaches of Confidentiality Resulting from Third Party Payors' Requests for Patient Information: The AMA (1) supports compiling and disseminating information about the extent of the problems (especially those related to breaches of confidentiality) created by insurance company practices relating to requests for patient information; (2) supports expressing to major health insurance companies its objections to insurance company practices which potentially jeopardize a physician's ethical responsibility to protect patient confidentiality; and (3) encourages state and county medical associations to work with local carriers to solve problems created by insurance company requirements which potentially jeopardize a physician's ethical responsibility to protect patient confidentiality. (Res. 75, I-89)

H-320.981 Relief From Third Party Payors Requiring Confidential Patient Information Over the Telephone: The AMA supports developing and pursuing appropriate solutions, including federal legislation if necessary, to the problems of telephone utilization review practices, their effect on patient confidentiality and their effect on the ability of physicians to practice medicine in a reasonable environment, and supports providing model state legislation for regulation of utilization review activities. (Res. 66, A-89)

H-320.996 Confidentiality: The AMA continues to encourage state legislatures to amend their current privileged communication statutes pertaining to physician-patient relationships so as to assure appropriate protection for communications between patients and all health care providers. (CMS Rep. J, A-80; Reaffirmed: CLRPD Rep. B, I-90)

Resolution 7 continued

and be it finally

RESOLVED, That the HMA provide a copy of this resolution including AMA policies printed above, Massachusetts Medical Association Policy Principles printed above, and the three key principles adopted by the AMA Board of trustees to all of the legislators in the Hawaii legislature, to all legislators from Hawaii in the US House and US Senate, to the Insurance Commissioner of the State of Hawaii; the Chief Executive Officers of companies licensed to provide insurance in the State of Hawaii; to any task force on privacy and confidentiality that HMA sits on, as soon as possible, to the Mayors of all of the Counties of Hawaii, to the Governor and Lieutenant Governor of the State of Hawaii, the President of the United States of America, and to any other persons or entities which the leadership of the HMA deems appropriate to send it to and make available for reference to the above persons and entities the complete policies of the AMA especially the Policy Compendium.

Fiscal Note: Minimal



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Use of Complementary and Alternative Medicine in Hawaii Cancer Patients

Carolyn C. Gotay, PhD

Abstract

This research investigated complementary and alternative medicine (CAM) use by Hawai'i cancer patients. Thirty-six percent of patients used CAM, most commonly religious/spiritual therapy and herbal treatments. CAM use was linked with younger age, female gender, Catholic religion, and more education. More research is needed to inform decision-making.

Introduction

Complementary and alternative medicine (CAM) has received increased attention in the past few years, both in the lay and professional literature. Although alternative medical practices and systems have a long history in the US,¹ the establishment of an Office of Alternative Medicine (OAM) within the National Institutes of Health in 1992 gave impetus to defining the field and setting a research agenda. The most recent definition of CAM, developed by a panel of experts convened by the OAM includes the following points: "Complementary and alternative medicine (CAM) is a broad domain of healing resources that encompasses all health systems, modalities, and practices and their accompanying theories and beliefs... CAM includes all such practices and ideas self-defined by their users as preventing or treating illness or promoting health and well-being..."² Specific types of CAM have been classified by the OAM to include alternative systems of medical practice (e.g., acupuncture), bioelectromagnetic applications (e.g., electromagnetic fields), diet, nutrition, and lifestyle changes, herbal medicine, manual healing (e.g., massage therapy), mind/body control (e.g., meditation), and pharmacological and biological treatments (e.g., anti-oxidating agents).

Given that cancer is a potentially fatal disease which is often not curable with currently-available allopathic medical treatments, it is not surprising that cancer patients are likely to seek out CAM therapies. Published reports of the prevalence of CAM use in cancer patients vary; a recent review of 26 surveys found reported use rates varied from 7% to 64%, with a mean across studies of 30%.³ Such variations are likely to reflect differences in definitions of CAM used by various investigators, as well as differences in characteristics of the respondents.

CAM use in cancer patients poses a number of serious concerns. For example, some CAM therapies have significant toxic side effects.⁴ Further, no quality control standards are in place for herbal supplements, creating inconsistency in dosages and the potential for contamination.³ CAM can be costly as well: in excess of \$14 billion overall is estimated to be spent annually in the US on CAM treatments.⁵ Patients may delay or refuse potentially curative cancer treatments in favor of CAM. On the other hand, some of types of CAM may be benign, or have some therapeutic effect. CAM may also contribute to better quality of life. Understanding these potential effects is essential before physicians can make recommendations about CAM use.

Hawai'i presents an exceptional environment to investigate the use of CAM therapies in cancer patients. Given the cultural diversity of the state, many different kinds of CAM therapies are readily available, including traditional Hawaiian healing and Chinese medicine, such as herbs and acupuncture. While intense ethnobotanical research is ongoing to identify biologically active components in native plants used in traditional medicine,^{6,7} no information is available about how many patients use these and other approaches and why they do so.

This report provides a summary of the results of two studies in newly diagnosed Hawai'i cancer patients: a survey of CAM use developed to determine the types of CAM therapies used, document the prevalence of use, and describe characteristics that distinguish CAM users; and an interview study designed to gain in-depth information about why breast cancer patients used CAM and how they evaluated their experience.

Study 1

Methods

Participants. Patients were identified through consecutive registrations on the Hawai'i Tumor Registry (HTR), a member of the National Cancer Institute-supported Surveillance, Epidemiology, and End Results Registry. Eligibility criteria were: histologic confirmation of any kind of cancer diagnosed between four and six months previously; ability to understand English; permission of primary physician; Oahu residency; Caucasian, Filipino, Hawaiian, or Japanese ethnic origin; 18 years of age or older. Participation was not limited by stage or site of disease.

Procedures. Permission was obtained from the attending physician before patients were contacted. Patients received a letter followed by a telephone call, and data were collected by interviews, most often at the patient's home. Interviews were conducted by one of four female research associates, all of whom had completed graduate work in social sciences as well as extensive training in

interviewing cancer patients. The patients completed a semi-structured interview which included the questions discussed in this paper. (Additional questionnaires were also administered which will be discussed in separate reports.)

Type of CAM use. Patients were asked, "Have you tried any alternative, traditional treatments or remedies? What were they?" The interviewers recorded verbatim responses in the patients' own words. The responses were then compiled and coded using the previously-mentioned classification scheme for CAM therapies developed by the OAM. The OAM's criteria provided a framework for classifying the responses of the patients in this study.

Results

Participation. A total of 367 cancer patients participated in the study, representing 58% of the total of 646 eligible patients who were invited to take part. The most frequent reasons for nonparticipation were patients not feeling well enough to take part or being "not interested." A comparison of participants and non-participants showed that there was some variation in response rate by ethnicity: 65% of Caucasians and Hawaiians, 56% of Filipinos, and 51% of Japanese patients agreed to take part. There was a gender difference in participation as well: 49% of men and 68% of women participated in the QOL interview. The participants were slightly younger than the patients who refused to take part (means of 62 vs. 68 years). Breast cancer patients were particularly likely to participate: 82% of the breast cancer patients agreed to take part in the study.

Three hundred forty three patients who provided complete information about CAM use comprised the sample for this paper. Cancer sites for these patients included breast (34%), prostate (29%), bladder (6%), and uterus (8%), as well as smaller numbers of a variety of other cancers. All patients had undergone some kind of cancer therapy; 81% had surgery, 39% radiation therapy, 24%, hormonal therapy, and 18% chemotherapy.

Types of CAM used. Table 1 provides a summary of the different kinds of CAM approaches, the number of patients in this study reporting use of each type, and examples of the kinds of remedies mentioned by patients. One hundred twenty two patients reported using a total of 195 different types of therapies, an average of 1.6 per patient. The most frequent type of CAM was religious or spiritual therapy; followed by herbal medicine and lifestyle changes. Within each category, patients reported many different types of treatments.

Prevalence and correlates of CAM use. Table 2 summarizes characteristics of study participants who did and did not report use of CAM therapies. It can be seen that, overall, 36% of the participants said that they had tried CAM. A number of patient characteristics were related to therapy use: age, gender, religion, and education. We did not observe significant differences according to ethnicity, marital status, cancer site or stage of disease.

In order to determine which of these variables was the best predictor of CAM use, a stepwise logistic regression was performed using the sociodemographic and clinical variables in Table 2. Two variables were significantly associated with CAM use in this analysis: having a college degree (odds ratio = 2.4, 95% confidence

Table 1.—Types of Complementary and Alternative Medical Therapies Used By the Patients.

Type of CAM	Number of Patients	Examples of Specific Treatments
Alternative Medicine	5	Acupuncture; Chinese, Hawaiian, or Japanese Medicine; Detoxifying Bodily Systems; Naturopathy
Lifestyle Changes	46	Dietary or Exercise Changes; General Improvements; Macrobiotic or Special Herbal Guidelines; OTC Vitamins and Minerals
Herbal Medicine	40	Aloe Juice; Herbal or Mushroom Teas; Herbal Supplements; Herbs and Vitamins Together; Marijuana; Seaweed; Wheat Grass
Mind / Body Control	24	Guided Imagery; Meditation; Mental / Spiritual Self-improvement; Positive Thinking; Reading Self-help Books; Relaxation; Support Groups; Visiting a Psychic; Visualization
Manual Healing	9	Massage; Shiatsu; Touch Therapy / Healing Touch
Pharmacological and Biological	10	Anti-oxidants; Enzymes; Flavonoids; Shark Cartilage
Prayer	61	Prayer By Others or By Oneself; Faith Healing or Healing Mass

Note: Some patients used more than one CAM. The total number of patients was 122.

intervals = 1.3, 4.3) and being Catholic (odds ratio = 1.9, 95% confidence intervals = 1.1, 3.3).

Study 2

Methods

Participants. Participants were asked to participate in an interview about their CAM experience on the basis of an affirmative response about CAM use on a mailed questionnaire that was part of an ongoing study of patterns of care in breast cancer. This study was open to all patients with newly-diagnosed breast cancer at several major Honolulu medical centers. Physician permission was obtained before patients were enrolled in the study. The study included

Table 2.—Variables Associated with CAM Use

Variable	Used CAM	Did Not Use CAM	Sig.
Age			
Under 50	26 (45.6 %)	31 (54.4 %)	p = 0.147 p = 0.022
50 – 69	59 (35.8 %)	106 (64.2 %)	
70 or Older	35 (30.4 %)	80 (69.6 %)	
Mean (Std. Dev.)	60.2 (13.1)	63.5 (12.1)	
Ethnicity			
Hawaiian	16 (38.1 %)	26 (61.9 %)	p = 0.911
Caucasian	38 (33.9 %)	74 (66.1 %)	
Japanese	45 (34.9 %)	84 (65.1 %)	
Filipino	21 (38.9 %)	33 (61.1 %)	
Education			
Never Finished High School	15 (32.6 %)	31 (67.4 %)	p = 0.012
High School Graduate	20 (23.3 %)	66 (76.7 %)	
Some College	39 (36.4 %)	68 (63.6 %)	
College Graduate	43 (46.7 %)	49 (53.3 %)	
Gender			
Male	46 (30.3 %)	106 (69.7 %)	p = 0.063
Female	74 (40.0 %)	111 (60.0 %)	
Religion			
Catholic	40 (45.4 %)	48 (54.6 %)	p = 0.044
Other Christian	40 (30.1 %)	93 (69.9 %)	
Buddhist	14 (28.6 %)	35 (71.4 %)	
No Preference	16 (30.8 %)	36 (69.2 %)	
Marital Status			
Not Married	31 (31.6 %)	67 (68.4 %)	p = 0.378
Married	83 (36.7 %)	143 (63.3 %)	
Cancer Stage			
Stage 0, 1, or 2	98 (33.8 %)	192 (66.2 %)	p = 0.118
Stage 3 or 4	21 (45.7 %)	25 (54.3 %)	
Cancer Site			
Breast	49 (42.2 %)	67 (57.8 %)	p = 0.103
Prostate	28 (28.3 %)	71 (71.7 %)	
Other	43 (35.2 %)	79 (64.8 %)	

a number of questionnaires as well as review of medical records which will not be discussed here.

Methods. A female medical student interviewer conducted semi-structured interviews at a location of the patient's choice. Most patients were interviewed at home. The interview included both open-ended questions and self-administered questionnaires.

Results

Participation. Twenty-eight patients were asked to take part in an interview about CAM, and 24 agreed. The ethnic distribution was: Caucasian (n=9), Japanese (n=6), Filipino (n=4), Chinese (n=3),

Hawaiian (n=1), and Native American (n=1).

Allopathic treatment. All patients had received surgical treatment, 13 had received chemotherapy, and 15 had received radiation. Most women were very satisfied with their medical care; on a scale of 1 to 10, where 10 signified "completely satisfied," respondents gave a mean score of 9.4 (n=20; four women did not wish to use the scale to respond to this question).

Types of CAM used and perception of results. Findings indicated that the patients used a great variety of therapies. The most common CAMs were herbs (n=13), vitamins (n=11), and massage (n=5). A great variety of CAMs were used by smaller numbers of patients, including aloe, meditation, noni, qi gong, meditation, healing touch, shark cartilage, and acupuncture. Most patients used more than one CAM simultaneously.

Most women were very satisfied with their CAM experience; on a scale of 1 to 10, where 10 signified "completely satisfied," respondents gave a mean score of 8.7 (n=17). Many women could identify specific outcomes that were associated with their treatment. For example, one woman took herbs prescribed by a Chinese herbalist for lymphedema and remarked, "He gave me great relief. Wow, my hands are almost the same size – he brought the swelling down." Several women cited the positive effects of aloe on wounds, and general increases in energy levels attributable to herbs, vitamins, and teas. A number of women were not sure if CAM had helped or not; as one person said about meditation and breathing exercises, "Psychologically, it was excellent. Physically, I don't know." Another woman was cognizant of possible placebo effects: "I think it's attitude too. You have to believe in it."

Discussion of CAM use with physician. No doctor advocated CAMs other than dietary changes as part of cancer treatment, although one physician recommended an herbal mixture along with an antibiotic. The women were asked if they had discussed their CAM use with their physician. About half (n=14) had done so. Of those who had not mentioned this to their physician, the most common reason was "It didn't come up." No woman who had discussed her CAM use reported a negative reaction. Most physicians seemed to take a neutral stance ("he didn't discourage or encourage me"), although a number were supportive, making remarks such as "Go for it!", "If you feel you want to take it, then go ahead." Several physicians asked to see the treatment (e.g., the bottle of pills or, in one case, a plant).

Case examples of patient experiences. To illustrate the variety of CAMs used by some women, and their experiences with them, several case studies of heavy CAM users are described below.

Case A. A 50 year old Japanese women who was diagnosed with a second primary breast cancer used a number of CAM approaches. She had received an advanced degree and worked full-time in a professional position. Mrs. A. obtained several herbs through a mail order company including pau'd arco (bark of the tahibo plant) and "neolife" vitamins (which included vitamins C, E, a selenium supplement, and others). She also ingested wheatgrass tea (to "clean my system"), lymph tea ("it's anti-cancer"), and "antioxidants." In

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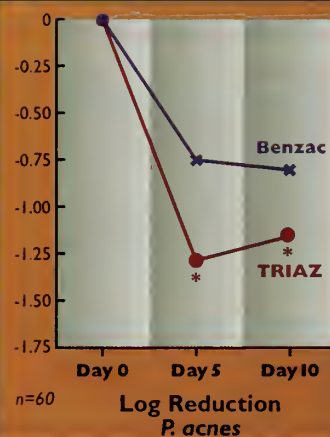
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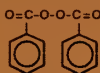
Allergic contact dermatitis and dryness have been reported with topical benzoyl peroxide therapy. See full prescribing information for further information.

[†]Data on file

¹Benzac is a registered trademark of Galderma.

TRIAZ® (benzoyl peroxide) Full Prescribing Information

DESCRIPTION: TRIAZ 6% and 10% Gels and TRIAZ 6% and 10% Cleansers are topical, gel-based, benzoyl peroxide containing preparations for use in the treatment of acne vulgaris. Benzoyl peroxide is an oxidizing agent that possesses antibacterial properties and is classified as a keratolytic. Benzoyl peroxide ($C_{14}H_{10}O_4$) is represented by the following chemical structure:



TRIAZ 6% and TRIAZ 10% Gels contain, respectively, Benzoyl Peroxide 6% and 10% as the active ingredient in a gel-based formulation consisting of: Water, C12-15 Alkyl Benzoate, Glycerin, Cetyl Stearyl Alcohol, Glycolic Acid, Polyacrylamide (and) C13-14 Isoparaffin (and) Laureth-7, Glyceryl Stearate (and) PEG-100 Stearate, Steareth S-2, Sodium Hydroxide, Steareth S-20, Dimethicone, Zinc Lactate, Disodium EDTA, TRIAZ 6% and TRIAZ 10% Cleansers contain, respectively, Benzoyl Peroxide 6% and 10% as the active ingredient in a vehicle consisting of: Glycerin, Petrolatum, C12-15 Alkyl Benzoate, Sodium Cocoyl Isethionate, Water, Special Petrolatum Fraction, Sodium C14-16 Olefin Sulfonate, Zinc Lactate, Carbomer, Potassium Polymetaphosphate, Titanium Dioxide, Triethanolamine, Glycolic Acid, Lavender Extract, Menthol.

CLINICAL PHARMACOLOGY: The mechanism of action of benzoyl peroxide is not totally understood but its antibacterial activity against *Propionibacterium* acnes is thought to be a major mode of action. In addition, patients treated with benzoyl peroxide show a reduction in lipids and free fatty acids, and mild desquamation (drying and peeling activity) with simultaneous reduction in comedones and acne lesions. Little is known about the percutaneous penetration, metabolism, and excretion of benzoyl peroxide, although it has been shown that benzoyl peroxide absorbed by the skin is metabolized to benzoic acid and then excreted as benzoate in the urine. There is no evidence of systemic toxicity caused by benzoyl peroxide in humans.

INDICATIONS AND USAGE: TRIAZ 6% and 10% Gels and TRIAZ 6% and 10% Cleansers are indicated for the topical treatment of acne vulgaris.

CONTRAINDICATIONS: These preparations are contraindicated in patients with a history of hypersensitivity to any of their components.

WARNINGS: When using this product, avoid unnecessary sun exposure and use a sunscreen.

PRECAUTIONS: General: For external use only. If severe irritation develops, discontinue use and institute appropriate therapy. After reaction clears, treatment may often be resumed with less frequent application. These preparations should not be used in or near the eyes or on mucous membranes.

INFORMATION FOR PATIENTS: Avoid contact with eyes, eyelids, lips and mucous membranes. If accidental contact occurs, rinse with water. Contact with any colored material (including hair and fabric) may result in bleaching or discoloration. If excessive irritation develops, discontinue use and consult your physician.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Data from several studies employing a strain of mice that are highly susceptible to developing cancer suggest that benzoyl peroxide acts as a tumor promoter. The clinical significance of these findings to humans is unknown. Benzoyl peroxide has not been found to be mutagenic (Ames Test) and there are no published data indicating it impairs fertility.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Animal reproduction studies have not been conducted with benzoyl peroxide. It is not known whether benzoyl peroxide can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Benzoyl peroxide should be used by a pregnant woman only if clearly needed. There are no available data on the effect of benzoyl peroxide on the later growth, development and functional maturation of the unborn child.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when benzoyl peroxide is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: Allergic contact dermatitis and dryness have been reported with topical benzoyl peroxide therapy.

OVERDOSAGE: If excessive scaling, erythema or edema occurs, the use of this preparation should be discontinued. To hasten resolution of the adverse effects, cool compresses may be used. After symptoms and signs subside, a reduced dosage schedule may be cautiously tried if the reaction is judged to be due to excessive use and not allergenicity.

DOSAGE AND ADMINISTRATION: TRIAZ Gels: Apply once or twice daily to cover affected areas, or as directed by your dermatologist. Use after washing with a mild cleanser, such as one of the TRIAZ Cleansers, and water.

TRIAZ Cleansers: Wash affected areas once or twice daily, or as directed by your dermatologist. Avoid contact with eyes or mucous membranes. Wet skin and liberally apply to areas to be cleansed, massage gently into skin for 10-20 seconds working into a full lather, rinse thoroughly and pat dry. If drying occurs, it may be controlled by rinsing cleanser off sooner or using less often.

HOW SUPPLIED: TRIAZ 6% Gel - 1.5 oz. (42.5 g) tube, NDC 99207-051-01. TRIAZ 10% Gel - 1.5 oz. (42.5 g) tube, NDC 99207-210-01. TRIAZ 6% Cleanser - 6 oz. (170.3 g) tube, NDC 99207-116-12. TRIAZ 10% Cleanser - 3 oz. (85.1 g) tube, NDC 99207-106-02. TRIAZ 10% Cleanser - 6 oz. (170.3 g) tube, NDC 99207-106-12. Caution: Federal law prohibits dispensing without prescription. Store at controlled room temperature: 15°-30°C (59°-86°F).

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addition, she consulted with an iridologist, a Christian prayer healer and someone who conducted colon cleansing. Further, she engaged in meditation. An auntie had been the person who suggested most of these remedies to her, and she had used them for the decade following her first diagnosis. She felt that using CAM gave her peace of mind and would save her from dying. In her view, in fact, CAMs should serve as primary cancer treatments since they are more likely to lead to healing than medical care. Mrs. A. added, "Take time out for fun. One of the major medications is to be happy."

Case B. Ms. B. was a single 50 year-old Caucasian woman who was a high school graduate. She had received surgery and radiation for her Stage I breast cancer. Ms. B. took Chinese herbs as well as Vitamins A, B, and C, evening primrose oil, garlic, calcium, antioxidants, and oolong tea. In addition, she practiced qi gong, participated in a reiki group, and underwent light therapy. She also took nutrition classes at a local medical center to improve her eating habits. She worked full-time in a service industry, and one of her clients had alerted her to these options. She said she chose CAMs "because I believe in alternatives. I don't believe that doctors aid you in healing. I didn't have any expectations. I went in with an open mind. It couldn't hurt and it felt right." Ms. B. felt that the CAM, qi gong in particular, "works because it's positive and natural. We have the capability of curing ourselves. Your mind can cure you or kill you."

Case C. Ms. C. was a single woman in her forties of Chinese-Korean ancestry who was diagnosed with Stage 2B breast cancer. She was a college graduate who worked full-time in a professional position. She had received surgery, chemotherapy, and radiation therapy for her disease and was currently taking Tamoxifen. With respect to CAMs, Ms. C. took sunrider (Chinese-oriented herbs), antioxidants, therapeutic tea, vitamins, garlic, Echinacea, aloe, and florabalan, as well as shiatsu massage. She believed that the herbs played a role in purging the body of toxins and also helped her to get through the chemotherapy: "I know it's done something, since being on the products helped me to respond to the drugs." She also noticed that the shiatsu helped her to regain motion in her shoulder after surgery. She saw CAM as complementing medical care: "It works hand in hand. They're two different things. The medical treatment blocks disease. (CAMs) are as effective as medical treatment in building up the body."

Discussion

This study provides the first report of CAM use in Hawai'i cancer patients. Study 1 is based on responses from a registry-based population and includes a heterogeneous group of patients who were assessed at the same time after diagnosis. Study 2 provides in-depth information on a specific population sub-group: women with breast cancer. Several caveats to data interpretation should be mentioned, however. Given the differential response rates, the results may be more valid for Caucasians, Hawaiians, women, breast cancer patients, and younger individuals. In addition, the survey and interviews relied on self-reports. Even though the interviewers were not part of the medical care team and had been trained to elicit candid responses to personal questions, it is possible that some patients may not have wanted to discuss full CAM use with the interviewer.

The patients reported using a tremendous variety of CAM approaches, and many used more than one approach simultaneously. For the most part, the kinds of therapies cited were consistent with the OAM classification. However, several significant differences are seen. The OAM listing includes "bioelectromagnetic applications," which includes blue light treatment and artificial lighting, electroacupuncture, electromagnetic fields, electrostimulation and neuromagnetic stimulation devices, and magnetoresonance spectroscopy. Only one patient in the interview study mentioned having tried one of these approaches. Perhaps they are not as popular in Hawai'i as elsewhere. On the other hand, the CAM listing includes "prayer therapy" within the general "mind/body control" category. In this sample, the use of prayer was so prevalent that we listed it as a separate category.

With respect to prayer, and in fact to all the therapies mentioned, sometimes patient responses indicated behaviors that did not greatly differ from everyday practices, while others represented a special cancer-related activity. For example, many patients reported saying prayers, or having prayers said by their church, to help themselves get well, while one patient said that the priest conducted a healing mass "to try to remove my sickness," and another had gone to a Christian prayer healer. Dietary changes included changes as simple as eating healthier foods and as complex as daily preparation and ingestion of a special soup using six fresh vegetables recommended by an alternative medicine institute. Many herbal medicines were mentioned, the most common being essiac tea and shark cartilage. While manual therapies were relatively uncommon, a number of patients reported experiences with "healing touch" in the hospital. One patient related how a staff member in the same day surgery unit included healing touch in preparations for her lumpectomy. "She 'laid over hands' and told me to 'see the light' and let it heal me. Wheeling me to surgery, (she) sang Happy Trails." The patient said she laughed, went along with it, and also felt more at peace.

Thirty-six percent of patients in this study reported using some kind of CAM. As mentioned earlier, previous estimates of how many cancer patients use CAM have varied considerably. These reports differ for a number of reasons: the year when the data were collected (since CAM's popularity has increased over the past decade), patient population (site of disease and type of institution), the length of time since cancer diagnosis, methodological differences in how patient response was elicited (e.g., an open-ended question, such as that in the current study, compared to a checklist), and the varying definitions of CAM that were employed. The findings of this study are quite consistent with the average percentage — 30% — reported in the world's literature. However, additional research is needed to replicate and refine this estimate.

These results of the survey indicated that CAM users tend to be younger, women, Catholic, and better educated. These correlations, with the exception of the link to Catholicism, are consistent with all other studies of CAM in cancer patients and other populations.³ Educational level has been investigated in virtually all studies of CAM use and consistently emerges as the strongest predictor. While this may seem surprising initially, it likely reflects greater knowledge and access to resources among people with higher education. Education may also confer increased self-confidence in knowing how to seek out additional support beyond what is provided in the hospital and doctor's office. Religion, and Catholicism in particular,

have not been identified with increased CAM use in other reports. However, as noted previously, the current population appeared to be much more likely to mention religious approaches for their cancer. It should be noted that a high percentage (73%) of Filipino patients were Catholics. While religion emerged as a more powerful predictor than ethnicity in our analysis, the small number of individuals in some groups limited statistical power to detect differences. It is likely that the many Filipino cancer patients seek support from their religion. We did not see other ethnic variation in CAM use, although our sample sizes were small. However, it is possible that the ethnocultural mix that occurs in many aspects of life in Hawai'i extends to this area as well, and that cancer patients in this state draw on the full range of options available from a variety of cultures. We did not find that CAM use varied according to stage of disease. However, it is possible that larger and more varied samples may report stage-associated differences in types and frequency of CAM use. For example, patients with completely resected cancer may be more likely to seek therapy to manage the symptoms associated with adjuvant chemotherapy or radiation as well as preventative interventions. Patients with advanced or incurable cancers may seek CAM modalities directed at treating their existing cancer. These issues may be addressed in future studies.

This study has shown many cancer patients in Hawai'i are using alternative treatments in conjunction with their medical treatments for cancer. Of 38 patients who were undergoing chemotherapy at the time they completed the survey, 11 (29%) reported taking herbal supplements of some sort at the same time. It is not known how many of these patients discussed their CAM practice with their physicians, although the interview study indicated that almost half of the women did not discuss their CAM use with their physicians. However, herbal remedies may have a number of side effects and may possibly interact with chemotherapeutic agents and other medications. Thus, physicians, and oncologists in particular, need to be aware of the common alternative practices available and used here in Hawai'i so that they may initiate discussion about these issues with their patients and guide them away from potentially harmful treatments.

The interviews with the breast cancer patients replicated a finding that has been reported elsewhere: satisfaction with medical care was rated highly, indicating that for many patients, using CAM is not a reflection of dissatisfaction with medical care. Although there were a few cases where the patient was "anti-biomedical therapy," most women in this study rated their medical care highly. Obtaining CAM appeared to meet different needs, including symptom control, psychological support, including stress management, spiritual concerns, and the ability to exert control over their health. A number of women remarked, "I had nothing to lose."

Additional research is required to examine the efficacy of CAM interventions. Since so few of the approaches used by the patients in this study have received rigorous evaluation, their value is unknown. Patients remain at the mercy of unsupported claims and powerful advertising, and they may waste time, energy, and money and end up demoralized or with worse outcomes than if they had not used CAM. Yet it is possible that CAM offers benefits in terms of symptom control, enhanced quality of life or survival. The very process of seeking out CAM may enhance patients' morale, and improve their efforts at self-care. The investigators at the Cancer Research Center have several other studies planned and in progress


that will lay a foundation to understanding more about why cancer patients seek CAM and its effects on patient outcomes. The team is also working to identify CAM approaches that will be acceptable to patients and physicians for testing in controlled trials. Such rigorous research will provide necessary information to enable cancer patients and their physicians to make informed choices about CAM.

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Help Your Heart Recipes

This recipe is intended to be part of an overall healthful eating plan. Total fat intake should be less than 30 percent of your total calories for a day — not for each food or recipe.

Five-Minute Soup

<p>4 cups low-sodium chicken broth, heated</p> <p>½ medium cucumber or 1 medium zucchini, sliced very thin</p> <p>4 fresh medium mushrooms, sliced</p>	<p>2 cups shredded fresh spinach, lettuce, or cabbage</p> <p>1 medium tomato, cubed</p> <p>½ cup cooked chicken or lean meat, shredded</p>
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Put all ingredients in a large saucepan. Bring to a boil over medium-high heat. Reduce heat and simmer for 5 minutes. Serves 6.

Nutrient Analysis per Serving			
53 kcal	Calories	10 mg	Cholesterol
4 g	Protein	30 mg	Sodium
3 g	Carbohydrates	1 g	Total Fat
1 g	Fiber	0 g	Saturated Fat
		0 g	Polysaturated Fat
		0 g	Monounsaturated Fat

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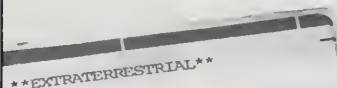
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Medical Futility and the Critically Ill Patient

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Larry J. Kaufman, M.D., F.C.C.P.

Abstract

Today, the world of critical care medicine has given us the capabilities to accomplish things that were only dreamed of a few decades ago. When combined with the increasing importance of patient autonomy and economics in healthcare, these new capabilities have caused conflicts about what is too little, and what is too much. Medical futility becomes an issue whenever these conflicts arise. Understanding how to deal with issues surrounding futility begins with defining it. A firm definition is not possible or desirable, but revolves around the probability of being able to achieve a patient's goal with modern medicine. Establishing this understanding between the patient and their family (team), and the healthcare team, is dependent on trust between the two. It must be recognized that there are many reasons for families to not trust healthcare professionals and that these reasons need to be explored and dealt with. Sometimes conflicts regarding predictions and economics need to be addressed. Once trust is established a goal for a course of medical treatment should be discussed from the patient's perspective. This discussion should involve the physician's best judgement as to the chances of achieving this goal, and what type of discomfort or indignity, if any, the patient may experience. Only after these have been clearly discussed can decisions regarding medical futility be made. To date, the U.S. Courts have refused to grant physicians and hospitals the power to override the opinions of family members on matters of futility. However, with time, a consensus of public opinion should influence decisions regarding medical futility.

Introduction

The role of the physician has always been to help the sick and injured. Foremost to this has been the desire to cure or mend the patient in order to return them to functional health. Today, an equally important part of caring for patients is helping them die with dignity and without suffering when they cannot be cured or mended. Nowhere is this dual role more important than in the modern Intensive Care Unit (ICU). Here the physician has at his disposal knowledge, machines, and monitors which can in many cases sustain physiologic life almost indefinitely. For the critical care physician the determination of when care is 'worthwhile' and when it becomes 'medically futile' becomes a constant struggle that takes place not only within the context of the individual's own values and ethics, but also with those of the patient and their family. This

struggle is illustrated by the estimate that 90% of patients (compared with 51% in 1988) who die in ICUs do so after a decision has been made to withdraw or withhold life support, making it the most common cause of death in the ICU.¹

More recently, society has had to face the reality that medical resources are not unlimited and that some mechanism for distributing these resources must be found. This has added to the equation the issue of economics and led to the new bad word for the next century, "managed care." Thus, medical futility is a term that has incited a whole host of discussions bringing together conflicts regarding autonomy, paternalism, trust, primacy of life, quality of life, healthcare reform, and medical rationing. It is a concept that, when taken literally, applies to very few cases, but when interpreted broadly and within the context of the imprecision of medicine, is frequently invoked. We will not solve the debate over medical futility, rather we will discuss its issues so as to help the participant understand the concepts and be prepared to help themselves, other healthcare professionals, and, most importantly, patients and families, deal with it when it arises.

Attempting to Define Medical Futility

Historically, physicians made decisions based upon the basic principles of beneficence (do good) and nonmaleficence (do not inflict intentional harm).² These issues were usually discussed and decided among the physicians and information was disclosed selectively in order to maintain control over what they felt was best for the patient. This allowed them to withhold care that was felt to be of no benefit. In the words of Hippocrates, to not provide interventions to those "overmastered by their diseases."³ Perhaps as a backlash to this paternalism, ethics and the law today give primacy to the principle of autonomy. Patients can refuse any intervention, even life saving ones. However, today's practitioners often interpret this as meaning that they must also offer every available treatment, no matter how absurd or overzealous, and that they must allow patients and families to decide when treatment is futile. Health care reform and the debates of today have begun to elevate the importance of distributive justice in medical ethics.² This is the idea that all of society should have an equal distribution of medical resources. The Single Master View illustrates the concern that this concept brings about, stating that health care providers "should not be providers and rationers of health care simultaneously."⁴

Throughout history the concept of futility has been imprecise. If discussed among a group of individuals, terms such as not going to work, impossible, very unlikely, wasted effort, and useless are typical of what might be used. The word futility is derived from the Latin *futillis*, which means one that pours or melts. Greek mythology holds that the daughters of King Argos, having killed their husbands,

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were condemned by the God Hades, to collect water for eternity using leaky sieves.⁵ Oxford Dictionary interprets this as an action that is "leaky, hence untrustworthy, vain, failing of the desired end through intrinsic defect."⁶ Random House Dictionary calls it "incapable of producing any result; ineffective, useless, not successful."⁷ In a medical sense, a futile action is one that is unable to achieve the desired goal or result.⁸

Hippocrates called on clinicians to acknowledge when their efforts would probably fail, stating, "whenever...a man suffers from an ill which is too strong for the means at the disposal of medicine, he surely must not even expect that it can be overcome by medicine....to attempt such futile treatment is to display an ignorance which is allied to madness." Hippocratic teaching further indicates that it is improper for a physician to engage in a practice that is hopeless, or that causes more burden than benefit.³

At the patient's bedside medical futility becomes an issue when families (or physicians) demand care that to others seems to be unreasonable. This care can leave care givers feeling frustrated, cause pain and suffering for patients and families, and waste precious resources. Sometimes this can be the result of denial, a lack of understanding or trust, or personal beliefs.

A Goal Oriented approach to determining medical futility has been advocated by Younger.⁹ He believes that determining that an action is futile must be based upon identification of a "goal." Next, it must be determined if the goal is attainable. Finally, it must be considered whether the goal is worth achieving and at what cost. Examples of possible goals in medicine are:¹⁰

1. Physiologic - Will a mechanical ventilator adequately oxygenate a patient?
2. Postponing Death - Will a mechanical ventilator postpone death?
3. Improving the Quality or the Duration of Life - Will mechanically ventilating the patient allow him or her to eventually live independently?

The Society of Critical Care Medicine has taken a similar position, although narrower. In May 1997, it defined futility as actions that "will not accomplish their intended goal." They cited four categories of treatment; treatments with no physiologic benefit, those extremely unlikely to be of benefit, those that have some beneficial effect, but are extremely costly, and those of uncertain or controversial benefit. Only the first category would be futile, and thus futility should be invoked only rarely, and should usually not be disputed.⁸

The U.S. Department of Veteran's Affairs has stated that "futile treatment may be defined as that which affords no benefit, or marginal benefit, weighing intrusiveness, burden, and risk against the ultimate outcome." This approach is broader and considers both the risk and burden with outcome. Rather than defining futility the VA sought to give examples of futility, such as treatment that would only prolong suffering or the dying process, patients that have no hope of leaving the Intensive Care Unit, treatments that have supportive data of poor outcome or provides only physiologic benefit without hope of attaining the patient's goals.¹¹

In Hawaii, the St. Francis Healthcare System has stated that futility needs to be addressed on a case-by-case basis, but should be considered whenever "treatment options have little or no chance of providing benefit." They give examples of this including treatments that only prolong the dying process or patient suffering, maintain a

persistent vegetative state, will not end permanent dependence on intensive care, do not improve the quality of life, or where there is no data to indicate a likelihood of a successful outcome.¹²

An alternative approach to determining medical futility is Probability Oriented. According to this approach a treatment should be considered medically futile if one of two categories are met. The "quantitative" category of futility occurs when an intervention has been useless in the last 100 cases. Statistically, this would give the clinician 95% confidence that no more than 3 successes would occur in each 100 trials. The "qualitative" category of futility is when any treatment merely preserves a permanent state of unconsciousness or fails to end a total dependence on intensive medical care. This treatment should be regarded as nonbeneficial and, therefore, futile.¹³ Such treatment should not be offered and, if demanded, should not be given.¹³ This approach has been criticized, in part, because of the unlikelihood that any one practitioner will have attempted a treatment on 100 occasions.^{14,15}

A more recent concept in futility has been the Futility Gap. This gap is defined as the distance between the highest level of functioning achievable by medical care and the lowest quality of life acceptable to the patient.¹⁶

Although most experts seem to base definitions of futility upon a goal oriented approach, a practical working definition probably lies somewhere between this and the others. Caplan summed it up by stating that, "medical futility must be understood as referring to both the probability and the desirability of attaining a...goal."¹⁷ Futility can be thought of as the final standard for terminating care when the patient's own wishes cannot be determined.

Where is the Trust?

Today, the most common mode of death in the ICU is the withdrawal or withholding of life support.¹⁸ This decision is usually based upon the physician's assessment of a poor prognosis. Ninety percent of families agree, within five days, to a physician's recommendation to limit life support, and only 4% refuse such recommendations altogether.¹ Thus the majority of patients and families are willing to place significant trust in their physicians when it comes to matters of life or death.

Recently, however, in forums ranging from the U.S. Congress to Hollywood and the Academy Awards, restricted access to proper healthcare has begun to make patients wary of healthcare organizations and physicians, and has begun to erode the traditional trust that the public has placed in its doctors. This places even greater responsibility on the physician when patients or families disagree or are hesitant to follow their recommendations concerning futile care. Personal values of physicians can easily cloud decisions of medical futility.¹⁹ Studies have found that clinicians themselves differ about what constitutes *quality of life*. Wachter found that despite the same statistical prognosis, physicians were more willing to write DNR orders for patients with a diagnosis of AIDS or cancer, than liver or heart disease.²⁰ An article by Curtis indicates that non-whites had more DNR orders than whites, despite the same diagnosis and prognosis.²¹ Thus the danger of having physicians give guidance in these matters is that the guidance may be more opinion than medical judgement and are thus subject to abuse. Trust can play a significant role in a patient's or family's response to a physician's decisions.

Trust can also be put into question by the principle of Effect

Versus Benefit.¹³ In a patient has suffered a massive stroke that has left her in a vegetative state, intubation and mechanical ventilation will have the *effect* of maintaining oxygenation to the patient's organs, but it will not produce the *benefit* of restoring the patient to conscious life. Is this treatment futile? Most people would feel that this is futile, but some people might believe in the ultimate importance of biological life and disagree.¹³ Can there be trust when the values of patients differ fundamentally from those of the care givers? Veatch has stated, "life-prolonging care is fundamental....How offensive it must be to a patient who believes in the ultimate value of biological life to be prohibited access to life-prolonging care by one's clinician."²² When trust is lost the difficulties grow. Families often begin to pit one member of the healthcare team against another. They seek out inconsistencies in statements feeling that pointing these out to the providers will force them to give better care.¹⁶

The best way to avoid these situations is to establish trust and understanding through communication. Communication must be established early and be honest and open. Preferably this is done in the office or pre-morbid setting where the stress is minimal and the patient's interests can be protected beforehand.²³

Can Medical Futility Be Predicted?

The use of withdrawing and withholding of life support prior to a patient's death has grown dramatically throughout the 1990s. In general, this determination is being done by physicians based upon their knowledge of diseases, the particular patient, and their own experience or judgement. However, the reliability of these physician determinations has come increasingly into question. Today, there are multiple severity of illness models that provide an estimate of a patient's hospital mortality. Some of the more widely tested models include the Acute Physiology and Chronic Health Evaluation (APACHE),²⁴ Mortality Prediction Model (MPM),²⁵ Simplified Acute Physiology Score (SAPS),²⁶ and the Pediatric Risk of Mortality (PRISM).²⁷ Recently, the Potentially Ineffective Care (PIC) model has attempted to predict combined outcomes of high resource utilization and short survival.²⁸ Many of these, in particular APACHE and SUPPORT, have established very large databases from which they have cross-validated and tested models to predict survival chances. These models have become indispensable as a point of reference for comparing outcomes between divergent ICUs and for stratifying populations based upon severity of illness for critical care research.

Can these models be used to predict individual outcomes and thus, medical futility? The current answer to this question is no. First, the concepts of probability and confidence intervals are very difficult to understand for most practitioners, let alone patients and their families. The predictions are often reported in a wide range of times and percentages. For example, during a retrospective review, the SUPPORT database predicted that an individual had a 17% chance of surviving for 2 months on the day before the patient actually died. It likewise gave the patient a 51% chance of 2 month survival 1 week before actual death.²⁹ Review of data from APACHE showed similar, although slightly more pessimistic, results.²⁹ In addition, the severity of illness models, by their nature, do not factor in data about patient preferences and goals, and individual experiences. Despite these constraints, attempts to develop databases of sufficient power

to be able to predict futility continue. Teres has stated that "with the increasing size of various databases there may soon be enough patients to reach quantitative estimates, as suggested by Schiderman, et. al."³⁰

Today, severity of illness models, while potentially helpful in guiding a physician, cannot be used as a sole guide for determining medical futility.

The Role of Managed Care in Medical Futility

Controlling the spiraling costs of healthcare has become a major priority in the United States. The recognition of limited resources and the promise of unlimited medical capabilities has led to the development of Health Maintenance Organizations (HMO) in an attempt to control costs, while continuing to provide state-of-the-art care. This has especially reached into the ICU, where cost and technology clash daily with medical futility. It has been estimated that up to 28% of all acute hospital costs come from the ICU, so it would seem to be the logical place to practice cost containment.³¹ More recently, a backlash against HMOs has derived from the perception that they are cutting costs and making money at the expense of patients and their healthcare. Highly influential public mediums such as the movies, newspapers, television, and even the U.S. Congress and the President, have sent a message that when it comes to health, an HMO cannot be trusted. As a part of HMOs physicians are often seen as their allies. The medical literature may contribute to this impression by suggesting that HMO practices are able to reduce the utilization of medical resources, such as critical care, by restricting PIC at the end of life.³² One study found that \$10,000 per patient and 0.5% of all ICU admissions could be saved by earlier use of DNR orders.³³ Another stated that there are three circumstances where requested interventions can be refused: when the care is unlikely to be of benefit, when the intervention is likely to cause more harm than good, and when the intervention conflicts with the principle of distributive justice.³⁴

Others have addressed the issue from a different perspective stating, "we could not afford a universal health system based on patient's demands. Such systems...allocate health care to socially powerful people...to the disadvantage of those with less power..."³⁵ It has been suggested that the issue of allocating resources to critically ill patients should revolve around distributive justice.² This concept has been further refined, by some, as referring only to those individuals that have certain moral or social value. How this will eventually be defined and how this principle will eventually be applied to critical care remains to be seen. Traditionally, during busy times when resources are scarce, the average severity of illness or acuity increases in ICUs.³⁶ Today, politics and economics can play a role in deciding who should be in an ICU.³⁷ This has led to widespread concern that the poor or minorities will receive disproportionately low levels of care.³⁸ Until firm guidelines are established, critical care physicians need to be alert to the restriction of resources based on questionable concepts.

To accomplish all of the above fairly, HMOs need to dedicate appropriate resources for care, guidelines for distributing the resources (preferably based upon established practice guidelines), appeal mechanisms, and monitoring systems. All of this should be done in conjunction with physicians, administrators, and patients, in an open atmosphere. Individual cases should be complimented by

patient preferences and directives.³⁹ Finally, although profit is important, maximizing medical benefit should remain the priority. Without such an approach the system will risk deteriorating into something worse than when it started.

Establishing a Goal

Establishing a practical and working definition of medical futility is a highly difficult and emotionally charged issue. In most cases, the concept of futility is unnecessary because the patient's family and physicians quickly come to agreement about how to care for the patient. When there are conflicts, however, they are strongly felt by both the healthcare team and the family. Because of the often differing perspectives of the parties involved, what may be futile to one group may be beneficial to another. Values can become presented as futility. Thus a firm broadly applicable definition is probably not possible or advisable. As we have seen, some authors and organizations have felt that most issues revolving around futility can be resolved by the establishment of a *goal*. Focusing on the goal and then the possible interventions is probably the best approach. For various reasons, most clinicians interact with families using an *intervention-oriented* approach. However, the best way to establish a goal is a *goal-oriented* approach.

Two scenarios will help to illustrate the difference between an intervention-oriented and a goal-oriented approach. A 76 year old man has severe pneumonia on top of his end-stage lung disease. Prior to this he was limited in his activities, but interactive and enjoyed visiting with his family. His mental and respiratory status is deteriorating to the point that he may require mechanical ventilation.

Intervention-Oriented - The physician approaches the family and states, "your father is getting very sick. Do you want us to continue to do everything?" or "Do you want us to put him on a breathing machine?" This approach is very common and can be very stressful and misleading to a family. Most (not all) people want a cure for their loved one, something that will at least return them to a level equal or better than before their hospitalization.⁹ When offered an intervention without discussing the chances of achieving this goal, many families will infer that the goal must be achievable or else it wouldn't be discussed.⁹ Unrealistic goals can quickly develop. In addition, when offered without discussion, many families perceive a burden of deciding whether or not they should allow the death of their loved one without the knowledge of the chances of actually achieving a cure. This is not fair. Another intervention-oriented approach is to unilaterally not offer or refuse interventions that the family may desire, without helping them understand the unpleasant realities or the ability of the intervention to achieve the goal.⁹

Goal-Oriented - The physician sits down with the family and explains why their father has begun to deteriorate. He focuses the discussion on the present situation. A discussion ensues about what outcome (goal) they believe their father would desire if he were able to participate. It may be revealed that he had a living will or that he had voiced an opinion to a family member. Possible goals may be: a fully independent life, life where he can interact with his family, life at home, or, in some cases, biological existence at all costs. Patients and families are more inclined to request futile interventions when they do not have adequate information about diagnosis and prognosis.⁹ The levels of medical uncertainty or mistrust of the physician may become evident and can be dealt with. Once a goal is

established a decision on an intervention must still be based on the probability of success weighed against the quality of the outcome. Low probability can be balanced by high value or utility. Different interventions impose different amounts of pain, suffering and indignity on the patient and family. A patient may want a certain goal, but only be willing to put up with a certain amount to achieve it. Thus a conclusion to a goal may be transfer to the intensive care unit, intubation and mechanical ventilation for a period of time, to see if the patient recovers. Or it can be to forego intubation altogether and to allow the patient to die peacefully. Or it can be full care at all costs, with eventual transfer to a full care facility. It is important to realize that differences in these matters may not be about futility, but rather about *values or goals*.

The Courts and Futility

The cases of *Karen Ann Quinlan* (1976) and *Claire Conroy* (1985), both in New Jersey, and *Barber* (1983), in California, established the rights of families and patients to refuse or withdraw care, even if that care was life sustaining or saving.⁴⁰ Of interest is the decisions by the courts pertaining to the right of physicians to refuse interventions demanded by a patient or family.

United States Courts have so far refused to grant physicians and hospitals the power to override the opinions and desires of family members when they desire continuing life support, especially if the patient is not overtly suffering. They have yet to address the specific issue of medical futility. *Baby L* (1990) was a 2 year old girl with severe neurologic disabilities who required repeated hospitalizations for uncontrolled seizures and recurrent aspiration pneumonias. The physicians sought to withhold further aggressive interventions, but the mother insisted. Before the issue could be decided by the courts another facility was found that was willing to care for the patient.⁴¹ *Helga Wanglie* (1991) was a 85 year old woman who was ventilator dependent in a persistent vegetative-state. After they were unable to obtain the agreement of the family to withdraw support, the hospital asked the courts to appoint a conservator on the grounds that such care was futile because it was not beneficial (not physiologically futile). The husband cross-filed, requesting that he be the appointed conservator. The court then appointed the husband as the conservator. However, before the issue of whether or not health professionals could override a family's wishes was further discussed, Mrs. Wanglie died. Observers have noted that the court agreed with the husband by appointing him as the conservator, citing this as evidence that the court supported the principle that who was making a decision was more important than what the decision was.⁴² The key here was not so much futility, but goals. *Baby K* (1992) was born anencephalic and required repeated hospitalizations for mechanical ventilation. No other hospital would take the child, so the Virginia hospital turned to the courts and requested that they not be required to provide mechanical ventilation to the child, citing a Virginia statute that states physicians are not required to "prescribe or render medical treatment" that is "medically or ethically inappropriate." Eventually the courts sided with the mother, citing a federal law requiring hospitals and practitioners to provide emergency care when requested. Notably, they avoided the issue of whether or not patients with futile conditions should be provided with supportive care.⁹

Societal consensus or opinion plays an important role in how

courts interpret the "public interest." While it is recognized that most people look at a permanent state of unconsciousness as an undignified existence, the courts have refused to state that this opinion is absolute. This legal posture may begin to change over time. Public opinion polls have consistently revealed that the majority of Americans do not believe that patients in a persistent vegetative state should receive unlimited life sustaining interventions. Although it is of physiologic benefit, such interventions are not capable of returning the patient to interactive life. On the basis of persistent public opinion on the issue, standards for withdrawing futile care in these circumstances can be developed that will be supported by the courts. Already it has been suggested that patients in a vegetative state should be assumed to not want life prolonging support unless evidence exists to the contrary.⁴³ Economic constraints may also influence judicial decisions. In 1995, a Massachusetts jury acquitted the physicians of Catherine Gilgunn (a 72 year old woman who had suffered irreversible brain damage) of malpractice for entering a Do Not Resuscitate order on her, shortly after which she subsequently died. One of the patient's daughters had adamantly opposed this step, despite agreement with the physicians by the patient's other two daughters. The patient's husband had refused to intervene. The court stated that "the State's interest in pursuing life is high when human life can be saved..., but wanes when the afflictions are incurable." It further stated that we must "balance her (the patient's) preference against the medical judgement to withdraw such treatment in the context of not whether, but for how long and at what cost, her life might be extended."¹⁶ Thus a consensus regarding healthcare goals for society may influence the definition of futility.

Discussion

Today, the world of critical care medicine has given us the capabilities to accomplish things that were only dreamed of a few decades ago. When combined with the increasing importance of patient autonomy and economics in healthcare, these new capabilities have caused conflicts about what is too little, and what is too much. Medical futility becomes an issue whenever these conflicts arise. Understanding how to deal with issues surrounding futility begins with defining it. A firm definition is not possible or desirable, but revolves around the probability of being able to achieve a patient's goal with modern medicine. Establishing this understanding between the patient and their family (team), and the healthcare team, is dependent on trust between the two. It must be recognized that there are many reasons for families to not trust healthcare professionals and that these reasons need to be explored and dealt with. Sometimes conflicts regarding predictions and economics need to be addressed. Once trust is established a goal for a course of medical treatment should be discussed from the patient's perspective. This discussion should involve the physician's best judgement as to the chances of achieving this goal, and what type of discomfort or indignity, if any, the patient may experience. Only after these have been clearly discussed can decisions regarding medical futility be made. To date, the U.S. Courts have refused to grant physicians and hospitals the power to override the opinions of family members on matters of futility. However, with time, a consensus of public opinion should influence decisions regarding medical futility.

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Notice to Proposers



SEALED PROPOSALS will be received by the Employees' Retirement System of the State of Hawaii, 201 Merchant Street, Suite 1400, Honolulu, Hawaii 96813 up to 4:30 p.m. on April 5, 1999, for: Chairperson and Members of the Medical Board of the Employees' Retirement System. Three persons will be selected, one Chairperson and two Members. At least one of the three will be licensed to practice as a psychiatrist.

The duties of the Medical Board are set forth in section 88-31, Hawaii Revised Statutes, and include arranging for and passing upon all medical examinations required by statute in connection with employee applications for disability retirement benefits and applications for accidental death benefits. The Medical Board investigates all essential statements and certificates submitted by or on behalf of the employee, and reports conclusions and recommendations in writing to the Board of Trustees of the Employees' Retirement System.

The Request for Proposals, ERS-99-02, may be obtained from the above office beginning at 7:45 a.m. on February 25, 1999.

To be eligible to serve on the Medical Board, Offerors must possess a current medical license or osteopathic license.

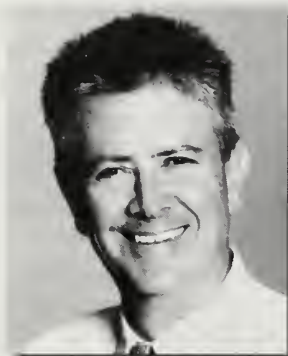
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It's about making managed care work for you



Dr. Rio Banner, our medical director, can answer your questions. Call him at 973-1650.

AlohaCare believes QUEST providers deserve the funds they need to care for patients. That's why we are taking a leadership role locally and nationally on the issue of risk factor adjustment. We support legislation and regulations here and in Washington, D.C.; we are working to educate government and health leaders about risk adjusting, and we are talking with the state Department of Human Services about equitable adjustments.

Risk adjustment

Physicians understand each patient is different. Language and culture barriers, chronic illnesses, homelessness, HIV status, substance dependencies and other factors complicate the delivery of care to some patients. Adjusting for these risks levels the playing field so that health plans compete on the basis of quality and efficiency. Without risk adjustment, plans have an incentive to attract and keep the healthiest enrollees and to avoid or disenroll the sickest.

How does risk adjustment work?

Information about individual enrollees and their risk factors are used to determine the capitation rate (or per member per month fee) to be paid to the health plan. Plans seeing the sickest patients get increased capitation; those seeing "healthier"

costs. If plans aren't being paid enough for these high-cost beneficiaries, they might attempt to "dump" by passing them to other plans. The plan or plans that enroll the greater-need members would end up less able to provide them with high-quality, cost-effective care.

Testing adequacy of risk adjustment

A risk adjustment system can be evaluated on the basis of how it adjusts for groups of people. If risk adjustment is really successful, plans would actively advertise for chronically ill enrollees as well as more healthy ones, because their rates would be adjusted to compensate for sicker members. At the same time, the payer, such as the state QUEST program, can maximize value—more money goes to providing care rather than building a plan's assets.

Will risk adjustment change the levels of funding needed for public programs?

Risk adjustment is specifically designed to be budget neutral. Risk adjustment simply allows the dollars already going into the public program to be more fairly allocated among health plans. It does not change the total dollars in the public program budget. Risk adjustment helps to remove the incentive to health plans to attract the healthiest enrollees.

Risk factoring is key to assuring quality of care and adequate recognition of the provider's role and needs.

patients get less. This is done within a fixed overall budget. For example, let's assume the capitation is \$100 a month. The plan seeing more of the sicker population might get \$102 while the plan with the healthier group might get \$98.

Risk adjustment and public programs

Under managed care, the amount health plans get per member is set, or capitated. If no adjustment is made to cover higher risk factors, it is difficult for plans to provide quality, cost-effective services to people with greater needs. Some plans would avoid enrolling these more costly people since plans can keep more money if they attract healthier members.

In the long run, this would sabotage the state's efforts to improve health and control

Analysis & research to refine the system

The system will continue to need recalibration as more of those who are in public medical assistance programs become enrolled in managed care. As the state-of-the-art in risk adjustment method matures, Hawaii's system will require continued research and analysis.

What does this mean to the provider?

An adequate risk adjustment system should allow health plans to fairly recognize and compensate the provider who cares for the more difficult or complex cases. An adequate risk adjustment system should allow and encourage health plans and reward providers which develop creative approaches to caring for the sickest/most needy patients.



AlohaCare

Nurses Fly High for Patients

Jason Kimura, QMC Senior Communications Specialist

Talk about working under pressure. Amy Bosich's patient was a foreign dignitary who came complete with a detachment of secret service agents. The dignitary, who had suffered a stroke, was being transported to the U.S. for medical treatment. The jetliner was well over the Pacific when the patient began having respiratory difficulty. Acting quickly, the critical care RN used an ambubag and suction to raise the patient's oxygen level while everyone else remained oblivious to the crisis. The patient was delivered safely to his destination; it was another successful mission for Flying Nurses of Hawaii.

"You have to be familiar with flight physiology to transport patients," said Amy, who has Hawaii Air Ambulance experience. "Barometric pressure drops and oxygen levels decrease. Moisture decreases too, so a patient could get dehydrated." A Queen's nurse since 1989, Amy has worked as a house crisis nurse and an off-shift nursing supervisor. Now she works part time in the 4C trauma ICU and is the owner of Flying Nurses of Hawaii.

The fledgling company is a "bed to bed" medical travel service that offers low cost local and worldwide assistance to patients who require medical attention during their trips. Services range from preparing simple medical itineraries to accompanying acutely ill, ventilator-dependent patients on commercial aircraft. A nurse meets with the patient's physician to certify fitness for travel, arranges all ground and air transportation and secures any specialized equipment and supplies. Evaluations are done at no cost.

Amy started her business because of the need she saw for the service. Over a dozen nurses act as Flying Nurses, including several Queen's nurses. The company's clients are mostly neurologic, trauma, orthopedic, cancer, head injury, stroke and respiratory patients. Without transportation services, many would not be able to go home. Tourists are periodically stranded here for many weeks when they suffer a mishap. Often, patients are not able to afford the \$20,000 needed to hire a private jet. Flying Nurses can do it for anywhere between \$2,000 and \$5,000 by using commercial airlines. "Hospitals and physicians are thrilled," said Amy. "The families of patients are thrilled." You wouldn't think the other passengers in the plane would be thrilled by the patients, who often ride first class. One patient was confused and agitated, and threw a few drinks. Another parroted foul language. (Amy had to talk at her to get her to stop.) Not true, says Amy. Most people have complemented our nurses on the valuable service they provide.

Currently, the company makes 16 to 20 flights per month. Two nurses are ready to go every day, and usually have two days notice while arrangements are being made. "You never know where you're going to go," said Amy, who has been to Japan, Taiwan, South Korea, Singapore, Australia, New Zealand, Micronesia, Samoa, Guam and virtually every state. She has brought patients from around the Pacific Basin to Queen's, and sees her business as potentially beneficial to Queen's International's effort to attract patients from Asia.

Classified Notices

To place a classified notice:

HMA members.—Please send a signed and type-written ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in HMJ as space is available.

Nonmembers.—Please call 536-7702 for a non-member form. Rates are \$1.50 a word with a minimum of 20 words or \$30. Not commissionable. Payment must accompany written order.

Office Space

Pearl City Business Plaza.— Tenant Improvement Allowances for Long Leases; 680+ sq ft; 24-hr security; free tenant/customer pkg; Gifford Chang 581-8853 DP, 593-9776, 531-3526.

Ala Moana Bldg.— PHYSICIANS WANTED to share space and support services. Interest in physical rehab. preferred. We have unique time-share arrangements starting at one half-day per week. Contact Dr. Speers, REHABILITATION ASSOCIATES, 955-7244.

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For Sale.— Aiea Medical Doctor's office and practice for sale. General Surgery / Family Practice. 33 yrs. in practice. Ideal for Internist and family doctor. 3 large exam rooms and one minor surgery room. Ample storage space. Phone: 488-5858

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Until there's a cure, there's the American Diabetes Association.

Until there's a cure, there's the American Diabetes Association.



Life in These Parts...

True Grit

William H. Wilkinson, MD, 86, of Waiialua died Jan 4 in Wahiawa Hospital after practicing for 59 years and delivering 5,000 babies. (The internist who cared for him was a baby he had delivered on Lanai.) Dr. Wilkinson was born in LA, graduated from Stanford Medical School - arrived in Hawaii in 1940. He first practiced at Ewa Plantation, then moved to Lanai in 1941 and stayed till 1952 when he came to Wahiawa where he worked full time until 2 weeks before his death...

Zap! Zap!

Craig Thomas ER physician at Wahiawa and Castle Hospital believes that portable defibrillators could save 200 lives on Oahu if 20% of cardiac arrest patients are saved. (Oahu's cardiac arrest survival rate is 3%) Assistant Police Chief Boisse Correa credits Craig as integral in getting \$200,000 in City funds for 90 portable defibrillators for the Honolulu Police Department.

Of Mice and Men:

Ryuzo Yanagimachi (Yama) — Mouse scale experiments in his shabby lab led to fertility breakthrough and international fame — Star Bulletin writer Helen Alton writes: "Cramped lab space, rusty pipes, mold and a failing air conditioner didn't deter UH researcher Ryuzo Yanagimachi and his team ..." Yanagimachi was happy to be back in his shabby laboratory after all the clamor in July over his group's cloning of mice — dubbed the "Honolulu technique."

Commercial application of the science eventually could enrich the researchers and the University. Alan Teramura, interim senior VP for research says, "The potential for the type of work they are doing is in the hundreds of millions of dollars."

Potpourri I....

A woman and her husband interrupted their vacation to go to a dentist.

I want a tooth pulled, and I don't want Novocain because I'm in a big hurry," the woman said. "Just extract the tooth as quickly as possible, and we'll be on our way."

The dentist was quite impressed, "You're certainly a courageous woman," he said. "Which tooth is it?"

The woman turned to her husband and said, "Show him your tooth, dear."

A young parish minister about to deliver his first sermon asked a retired cleric for advice on how to capture the congregation's attention.

"Start with an opening line that's certain to grab them," the older man said.

"For example: 'Some of the best years of my life were spent in the arms of a woman who was not my wife.' " He smiled at the younger man's shocked expression before adding, "She was my

mother."

The next Sunday the young clergyman nervously clutched the pulpit rail in front of the congregation. finally he said, "Some of the best years of my life were spent in the arms of a woman."

He was pleased at the instant reaction - then became panic stricken. "But for the life of me, I can't remember who she was."

Overheard: "I'm trying to keep up with the Joneses, but every time I catch up, they just refinance!"

The driving instructor was giving lessons to an extremely nervous student who panicked whenever another car approached on a particular two-lane road. One day, however, they got to the same stretch of road, and she remained completely calm.

"This time you're doing fine!" exclaimed the instructor.

"Yes," the novice driver agreed. "Now when I see another car coming, I shut my eyes."

Life in These Parts...

Ailing Medical Industry Needs More Than A Pill (Excerpts from Malia Zimmerman's knowledgeable article in Pacific Business News Dec 28)

Every sector in the local medical industry is struggling with increasing costs, a demand for more coverage and the need to invest heavily in medical technology...

Medical providers are burdened by the responsibility to provide coverage to local employers no matter what the company can afford...

Hospital executives are trying to purchase the latest high tech equipment and attempting to shorten hospital days to keep costs down and to maximize revenue...

Doctors say they are making less money. Their piece of the financial pie is shrinking due to higher insurance costs, state regulations and lower reimbursement...

Patients are demanding more. They are demanding coverage for alternative care options. ie chiropractic, acupuncture and naturopathic...(HMSA with 600,000 members is planning to extend coverage for alternative health benefits)

Kailua physician Robert Sussman says, "If alternative medicine coverage is implemented, rates will go up, people will pay more and doctors will receive an even smaller piece of the pie."

Gentle Persuasion:

Art Academy lawn sign: "Mahalo For Using The Side Walk."

Potpourri....

A psychology professor and a history professor are sitting on the porch of a nudist colony watching the sun set. The historian says to the

psychologist: "Have you read Marx?"

And the psychology professor replies: "Yes, I think it's the wicker chairs."

Appointed, Elected & Honored...

Scott Hundahl is the new chairman of the Commission on Cancer. Scott has been practicing in Honolulu since 1988 and has been chief of surgery at QMC since 1995.

AMA News

A study published in the JAMA Dec 23 Issue recommends that laws barring felons from buying guns should be expanded to include those who have committed misdemeanors. A 15 year study has found that handgun purchasers with a prior misdemeanor conviction are five times as likely to be charged with new offenses involving firearms and violence.

Potpourri II....

"Hello, welcome to the Psychiatric Hotline.

"If you are obsessive-compulsive, please press 1 repeatedly.

"If you are co-dependent, please ask someone to press 2.

"If you have multiple personalities, please press 3,4,5 and 6.

"If you are paranoid-delusional, we know who you are and what you want. stay on the line until we can trace the call.

"If you are schizophrenic, listen carefully and a little voice will tell you which number to press.

"If you are manic-depressive, it doesn't matter which number you press. No one will answer."

Some flawed new opportunities for investment:

The Gingrich bond: has no maturity.

The Dole bond: has no interest.

The Clinton bond: has no principle

(Adapted from Financial Times)

Now that my mother's office has a fax machine, I fax my correspondence to her instead of using the post office. Although I've told her many times that it's a faster and less expensive way to communicate, she continued to mail me weekly letters.

On my last birthday, however, she showed that she now has a full grasp of technology. She faxed me a \$100 bill with the note: "Happy Birthday. You're right — it is cheaper to fax than mail. Love, Mom."

Letters to the Editor

(With Apologies to Norm)

Physician assisted suicide/death

Fred Holschuh, MD Honokaa

(Hawaii-Tribune-Herald Dec 7 1998)

As a long time Big Island emergency physi-

cian, I am involved in end of life care on a daily basis. The 1999 State Legislature will almost certainly be considering legislation regarding physician-assisted suicide/death. Although I think all of us want control of our own end of life decisions, I will be speaking in opposition to any bill to legalize physician-assisted suicide or death (PAS/PAD). The Hawaii Medical Association and the American Medical Association oppose PAS/PAD feeling it is inconsistent with the physician's role as a healer.

I want to mention a personal example involving my elderly parents (late 80s) who came to live with us in March of this year. My mother, a 50 year smoker who quit over 10 years ago, died at home Nov 17 of a recently discovered but rapidly progressive lung cancer. She had clear advanced directives and a desire to die at home and we were able to be with her at the end. In her case, she had what experts on dying have called a "good death" as she was able to put her affairs in order, knew her advanced directives would be honored and was afforded relief of as much pain and suffering as possible.

My father, who is 89, who once ran one of the largest defense corporations in the world, and who now has the confusion and memory loss often associated with aging, presents a different side of the PAS/PAD issue. One could easily imagine a scenario where a very aggressive, profit driven, mainland type managed care organization might offer PAS/PAD to my father if he lived alone, with the argument that if he ended his "suffering" more medical care would be available for his grandchildren and great grandchildren. Feeling his life is nearing an end anyway, and missing his wife of 63 years terribly, he might well be coerced to opt for an end of life action.

I feel, at this time, we have not addressed the issue of PAS/PAD adequately, to make the practice legal. We can and must, however, do better education of the public and caregivers on end of life care issues, including cessation of futile care, provide effective pain management, have greater availability and use of hospice, create and encourage more widespread use of advanced directives and encourage more widespread use of advanced directives and living wills. We have to ensure that people's advanced directives are honored. I think before we embark on the path to legalizing PAS/PAD we must as a society be more comfortable discussing death and dying and allow physicians, patients and families to deal with this very personal issue with complete trust as they would any other aspect of health care. To partially quote ethicist Hans Jonas: "...a patient must never have to suspect that his physician might become his executioner."

If after thoroughly evaluating the effects of more comprehensive approaches to end of life issues, there are still many people who feel loved ones have had unnecessary, agonizing end of life experiences, PAS/PAD can always be revisited.

Medical Tidbits...

Bethesda Maryland: Scientists of the National Institute of Health report that a chemical in marijuana may protect brain cells from the effects of a stroke. Researchers found that in experiments

with rat neurones, cannabidiol prevented more than half the brain cell death associated with strokes. If the findings are confirmed, cannabidiol can limit brain damage in victims of strokes, heart attacks, Alzheimer's and Parkinsonism.

More On Silicone:

London: A panel of scientists appointed to review evidence that silicone breast implants cause long term illnesses concluded that women have no need to worry. The seven scientists appointed to a review panel by the government health ministers could find no conclusive evidence that silicone causes immune system disorder or other serious illnesses. Silicone implants have been banned in the U.S. since 1992, but the UK has no restrictions.

Conference Notes:

Pet Scanning Marc Coel QMC Nov.20 '98

A. Positron Annihilation

$P \rightarrow N + e^+ + V + \text{energy}$

Positron Emission

Tomography: Hamamatsu: \$3 x 10⁶

B. Uses PET scan:

- Tumor detection, staging and follow-up
- Viable myocardium detection
- Seizure disorder
- Dementia
- Brain function (Research)
- Infection Imaging (Research)

**Tumor cells have high metabolic rate

\bar{c} ↑ glucose metabolism

FDG-PET in Ca Detection;

Staging and Recurrence

Lung	Breast
Melanoma	Lymphoma
Colorectal	Bone & Soft Tissue
Head & Neck	Cholangiocarcinoma
Thyroid	Pancreatic
Brain	Esophagus

C. Cases in Hawaii (Tumor Registry)

Lung	632
Breast	882
Colon	490
Thyroid	76
Lymphoma	180
Hepatoma	72

D. PET Scanning at QMC: \$5^{1/2} x 10⁶ cost
\$3,000/test: saves on need for surgery:

PET Scanning:

- F18 FDG PET: metastatic nodes detected even \bar{c} normal CT
- F18 FDG PET demonstrates normal lymph nodes despite abnormal CT

Lung Ca Staging:	PET	CT
Sensitivity	95	82
Specificity	*76	71

*False + with active TB

FDG-PET and SPN

(Single pulmonary Nodule)

\$10,000/pt : Savings with PET before biopsy

Cost Savings with PET:

- Less workup
- Avoid surgery (Approx 15%)
- Lower mortality

Lung Ca Biopsy-Algorithm

a. CXR b. CT scan chest c. Biopsy

d. FDG-PET \rightarrow + mets = stop
MRI

FDG PET in Colonrectal Ca

—sensitivity 100%

—Specificity 67%

Positive predictive value: 92%

Negative predictive value: 100%

**4/5 "False +" proven true + in F/U Therefore specificity > 90%

Recurrent Colon-rectal Ca:

FDG-PET vs CT Savings

Calif PET = \$4300/pt

UCLA: Conventional + PET \$220/pt

U of Wash: \$7626/pt

Detection 1° Breast Ca:

FDG-PET for axillary mets:

If negative \rightarrow sentinel node biopsy

If positive: node biopsy or preop radiation

DDX: a. Pancreatic CA esp high glucose uptake = more malignant

b. Brain tumor or radiation necrosis

c. NSCLC (Non small cell lung Ca): distant mets

d. Lymphoma: high grade & intermediate grade a/c high glucose uptake
Staging costs: UCLA:

\$68,192 Standard work up

\$37,000 PET workup

e. Melenoma: FDG-PET detected mets up to 6 mos before conventional Xrays & PE; fewer false positives

PET Scanning: a. Dx b. Extent (Staging)

c. Choice of Rx d. Response to Rx:

FDG-PET in post MI: viable myocardium

FDG-PET in Seizures, Alzheimer's: glucose metabolism of brain

Potpourri III....

One day, a man came home from work and his wife greeted him. "I've got good news and bad news," she said.

He swallowed hard and said he'd like the good news first.

"The air bag works," she said.

When the preacher's car broke down on a country road, he walked to a nearby roadhouse to use the phone. After calling for a tow truck, he spotted his old friend, Frank, drunk and shabbily dressed at the bar. "What happened to you Frank?" asked the good reverend. "You used to be rich."

Frank told a sad tale of bad investments that led to his downfall. "Go home," the preacher said, "Open your Bible at random, stick your finger on

the page and there will be God's answer."

Some time later, the preacher bumped into Frank, who was wearing a Gucci suit, sporting a Rolex watch and had just stepped out of a Mercedes. "Frank," said the preacher, "I am glad to see things really turned around for you."

"Yes, preacher, and I owe it all to you," said Frank. "I opened my Bible, put my finger down on the page and there was the answer - Chapter 11."

A man appeared to be on his last legs. He constantly gasped for breath and his eyes popped out. The mystified doctors weren't hopeful, so he decided to live it up.

He went on a shopping spree. At an expensive haberdashery, he pointed out a dozen silk shirts in size 14.

"Your neck looks bigger than 14," said the clerk. "You need a 16."

"I know my size," the man insisted. "I want the shirts in a 14."

"I'll get them for you," replied the clerk. "But I want to warn you - if you wear a 14 you'll gasp all day and your eyes will pop out."

Milton Berle

The ARB's

(Introduction by Peter Cohn, editor of Cardiology Review Nov '98 Issue)

"The management of hypertension has undergone continuous change over the past decade. Not the least of these advances has been the realization that blocking the effects of the renin-angiotensin-aldosterone system (RAAS) can lead to successful treatment of high blood pressure in many patients."

1. ACE: Side effects: a. hyperkalemia
b. increase in serum creatinine c. cough

2. ARB's: (Angiotensin AT₁ receptor blockers): side effect profile similar to placebo

***RAAS important in hypertension and congestive heart failure:

***ARB's:

- a. Losartin (Cozaar)
- b. Candesartan (Atacand)
- c. Irbesartan (Avapro)
- d. Valsartan (Diovan)
- e. Telmisartan (Micardis)
- f. Eprosartan (Teveten)

***Current Trials \bar{c} ARB's (on going):

- a. CHF b. Type II c. LVH d. MI
- e. Isolated systolic HTN

Conference Notes....

"Cardioprotection — Clinical Definition" VP Claude Benedict, Prof of Medicine, U of Texas, Medical School fri Oct 9 '98

Introduction: In DM, HTN, CHD etc, the common issue is involvement of blood vessels ... Therefore, vascular protection is an important issue; hence the role of Angiotensin II...

Comparison of 5 yr survivals:

1. End stage cardiac failure:

Women: 25% Men: 35%

2. Duke's C Colon Ca:

48% 5 yr survival

3. Breast Ca: 65% 5 yr survival

Diabetics: DM interacts with CHF. Survey of 2,000 CHF pts: DM raises CHF 33%; ARB's work in DM pts.

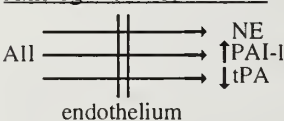
LVH: Angiotensin II causes LVH in young adults (Ages 16 - 24); All causes vascular and cardiac changes in healthy individuals.

All \rightarrow \uparrow fibrous tissue and \uparrow smooth muscle cells \rightarrow causing narrow vessels

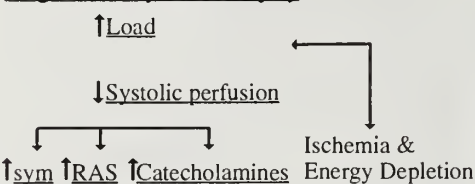
Hypertensive heart disease: \uparrow interstitial and perivascular fibrosis \rightarrow \downarrow coronary blood flow; Syndrome X: disease in small blood vessels

Thromboembolic Diseases: a/c MI rates and renin levels in HTN pts; cardiovascular complications in HTN a/c renin levels. ie \uparrow renin levels \rightarrow MI and CVA's Therefore All \rightarrow Strokes

Atherogenic Effects of All



Progression Myocardial Injury



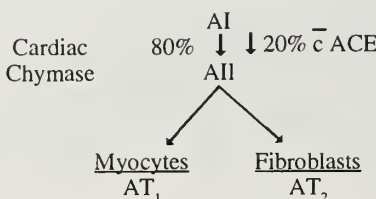
All Effects in CHF:

- a. Vasoconstriction
- b. Aldosterone stimulation
- c. Renal Efferent arteriole constriction
- d. Collagen synthesis
- e. Myocyte growth/remodeling
- f. Endothelium secretion
- g. Vascular smooth muscle growth
- h. Superoxide production

SOLVD Trial: ACE Therapy:

\uparrow survival CHF (Still 40% mortality);

\uparrow All levels even with ACE Therapy.



Coronary Artery in CHF: All \rightarrow vasoconstriction; LOSARTIN blocks vasoconstriction

LOSARTIN ROLE (50 - 100mg) Wait 8 to 10 wks for optimal role; may add HTZ

Renal Effects of ARP's (eg Losartin): 50mg \rightarrow 30% \downarrow proteinuria; 100mg \rightarrow even greater \downarrow proteinuria

L VENTRICULAR HYPERTROPHY:

- a. Valsartan > Atenolol in LVH
- b. 50% \downarrow mortality in CHF with Losartan vs Captopril
- c. Reduction in sudden cardiac death: Losartan > Captopril

Excuse Us!

(Excuse notes from parents collected by Nisheeth Parekh of the University of Texas medical Branch)

My son is under a doctor's care and should not take PE today. Please excuse him.

Please excuse Lisa for being absent. She was sick and I had her shot.

Please excuse Gloria from Jim today. She is administrating.

Dear School: Please excuse John being absent on Jan 28, 29, 30, 31, 32 and also 33.

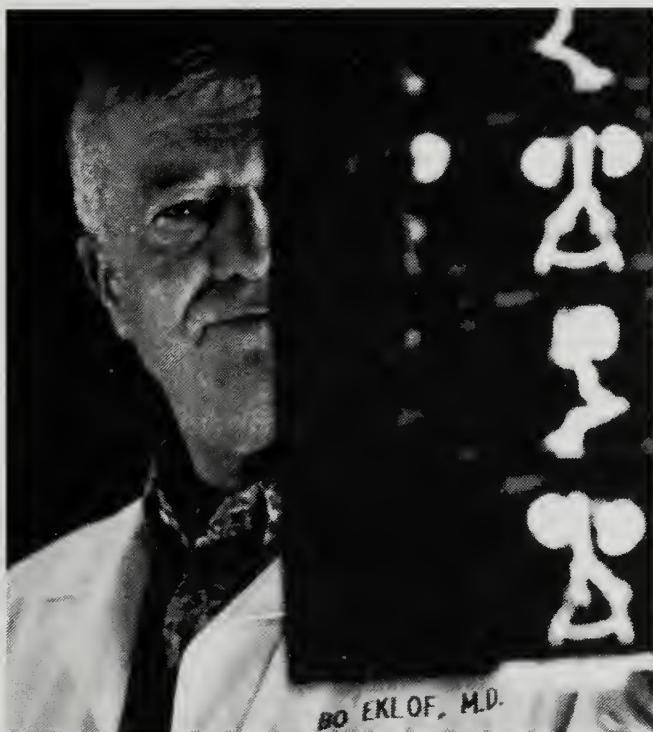
John has been absent because he had two teeth taken out of his face.

Please excuse Roland from P.E. for a few days. Yesterday he fell out of a tree and misplaced his hip.

Please excuse Ray Friday from school. He has loose vowels.

Sally won't be in school a week from Friday. We have to attend her funeral.

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Straub Clinic & Hospital, Inc. is accredited by the Hawaii Medical Association to sponsor continuing medical education for physicians.

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You are invited to attend...

– Patient Care Conference –

Phytoestrogens

Harold A. Beck, MD

March 2, 1999 4:30 – 5:30 p.m.

Doctors Dining Room

LEARNING OBJECTIVES

At the conclusion, participants should be able to:

- Describe the biochemistry and identify the dietary sources of phytoestrogens.
- Review the published epidemiologic, clinical and basic science (mechanistic).
- Literature on phytoestrogens and:
 - cancer
 - cardiovascular disease
 - menopause/osteoporosis
- Design guidelines for patients interested in the clinical use of phytoestrogens.

– Friday Noon Conference –

Management of Pleural Effusion

Roy S. Adaniya, MD

March 5, 1999 12:30 – 1:30 p.m.

Doctors Dining Room

LEARNING OBJECTIVES

At the conclusion, participants should be able to:

- Gain knowledge in the different etiologies of pleural disease.
- Management of pleural effusions.
- Understand how pleural effusion can effect lung function.

– Tumor Board Conference Luncheon–

Head and Neck Cancer:

Basics of Diagnosis and Treatment

Anthony J. Cmelak, MD & Barbara A. Murphy, MD

March 8, 1999 12:30 – 1:30 p.m.

Doctors Dining Room

LEARNING OBJECTIVES

At the conclusion, participants should be able to:

- Understand the basic epidemiology, histopathology, anatomy and staging of head and neck cancer.
- Recognize the conventional therapy for the treatment for localized carcinomas of head and neck.
- Summarize the standard and new drug and radiation therapy for patients with metastatic disease.

We would like to acknowledge the generous Educational Grant from Bristol-Myers Squibb Oncology

– Friday Noon Conference –

Environment of Care Issues That Impact Physicians' Daily Practice

Kevin Matsukado, Rose Arpon, Michelle Fisher,

Mike Lau, & Clayton Takara

April 16, 1999 12:30 – 1:30 p.m.

Doctors Dining Room

LEARNING OBJECTIVES

At the conclusion, participants should be able to:

- Understand and identify Infection Control, Tuberculosis, and Bloodborne Pathogens.
- Learn how to prevent Back Injuries.
- Understand Radiation Safety.
- Summarize Safety, Security, Hazardous Materials and Waste, Life Safety, Medical Equipment, Utility, and Emergency Preparedness.

Please call Fran Smith at 522-4471 for more information.



Lying Under Oath - A Serious Crime Outside Pennsylvania Avenue.

Who would have thought it? Squeaky clean St. Paul Fire and Marine Ins. Co. one of the nation's largest malpractice insurance carriers, first lost a law suit when accused of encouraging false testimony, and now has been indicted by the Mobile (Alabama) County Assistant DA on criminal charges of perjury. The case centers around a 1993 gall bladder surgery in which the nurse anesthetist, Wayne Zimlich, saw the patient's heart rate drop precipitously. He tried to treat her with drugs, but failed to notify the surgeon or anesthesiologist Antoine Savoie, that there was a problem. Lack of oxygen caused brain damage, and the patient died a few months later. The record indicated the patient was anoxic for three or four minutes, according to the nurse's testimony and the hospital record, but Zimlich later swore the actual time was 10 minutes. Zimlich lost his job with the anesthesia group, and contended that he had informed St. Paul officials that the clinical record had been falsified, and the case was not defensible. He sued St. Paul accusing the insurer of bad faith in refusing to settle the case. Zimlich felt the defense strategy was to leave him to shoulder the blame and to shield the doctor from liability. A second trial made headlines when allegations were made that Zimlich was encouraged to falsify testimony. Damaging memos, E-mails, and letters regarding the inner workings of the defense team became public. The jury found against St. Paul and awarded Zimlich \$5,000 in compensatory damages and \$10,000 in punitive damages. The assistant DA read the newspaper, investigated the case and issued indictments. If convicted, the medical and legal professionals could lose their licenses, and each defendant could face up to 10 years prison time and a \$5,000 fine. Criminal trial due in February.

The Art Of Giving Is To Give Something Which Others Cannot Buy.

Robert Tenery, M.D., Texas ophthalmologist and current chairman of the AMA's Council on Ethical and Judicial Affairs, stated that prisoners who have been condemned to death have raised the issue of donating their organs. The recent interim meeting of the AMA House of Delegates put the issue before an open forum with some fairly heated debate. Stephen Wallach, M.D., alternate delegate from Hawaii, offered the opinion that prisoners should be allowed to donate their organs, but stated that careful guidelines should be structured, otherwise, a prisoner's date of execution might be altered because, "we need your heart tomorrow." Charles Hickey, M.D. alternate delegate from Ohio disagreed, stating that even the discussion of such a measure could be "viewed with outrage as an example of incredible barbarism by the rest of the world." Huh? Why is this an issue? If the law allows any sane, adult citizen to donate his organs why should a prisoner be denied the same choice merely because he/she knows the date of demise?

The Obscure We See Eventually. The Obvious, Much Later.

Marilyn Chase writes a health column for the Wall Street Journal and chose the new year to pen a discussion of laser refractive surgery. Describing a 43 year old ecstatic patient who awakens to 20/15 vision, and calls the procedure "a piece of cake," the column proceeds with booming statistics of 1998 roughly doubling the number of cases in 1997, driven by the success of the laser. But the subsequent commentary depicts less than desirable results such as astigmatism, scarring, haze, infection and halos. 20% of patients require touch-ups to get a more precise result, and many older patients must wear reading glasses. A caveat of up-front cost ranges from \$3000 to \$6000. Lasik is noted to be exquisitely precise, requiring more training and a longer learning curve, and in inexperienced hands, the flap can pucker or be sliced inaccurately, impairing vision. Moreover, a UCSF laser surgeon flaunting his glasses, is quoted, "If you don't mind glasses or contacts, don't do it. It's still surgery, and there are risks." Finally, the FDA has to fight the troublesome flurry of illegal "gray market" lasers imported for individual surgeon use, and surgeons should tell their patients whether a particular application is approved by the FDA.

Might Doesn't Make Right, But It Never Gives Up Trying.

American Medical Association EVP, E. Ratcliffe Anderson, M.D. has asked the Justice Department to challenge the proposed merger of Aetna and Prudential. It is highly unusual for any medical organization to publicly oppose a

private-sector merger, but this one has the potential to do considerable harm. As Dr. Anderson pointed out, "the market power that would be created by this merger would limit the choices of patients, employers, and corporations, it would reduce competition, and further erode the ability of physicians to make medical decisions based upon medical science and the needs of their patients." Janet Reno and associates should be sympathetic, because this proposed combine could wield tremendous power in all areas of the medical marketplace.

Tomorrow Is Very Much Like Today, Except It Isn't Here Yet.

The medical turf battles go on as the third parties downgrade quality to cut costs while organized medicine works to maintain quality of care and patient protection. Big bucks are rolling into political action committee coffers in the struggle between the American Society of Anesthesiology and the American Association of Nurse Anesthetists. At issue is the proposal that nurse anesthetists would be allowed to work without being supervised by anesthesiologists. At the present time, the federal government requires doctor supervision when a CRNA is used during surgery for Medicare and Medicaid patients. So far, the Health Care Financing Administration has not come up with its final rule. Over the past two years anesthesiologists have added over a million dollars to their PAC while the nurses have contributed \$650,504 to theirs. HCFA officials have stated that they do not know when a ruling will come.

Iris Identification - One More Sign That Your Identity Belongs To Someone Else

In the United Kingdom, Sensar, Inc. has begun a bank pilot program of iris-identification as a means of using ATMs and teller stations in Nationwide Building Society, the country's largest savings and loan. It's much easier than retinal identification and more accurate than DNA testing, according to Sensar. The program involves nothing more than a standard video camera to photograph the client's iris which is then compared with one on file. No additional forms of ID are required. The company plans to hold its first North American consumer pilot soon.

Most Of Us Are Born With Medical Assistance, And Die With It Too.

In Texas, a man was diagnosed with prostate cancer. He lost his job of eleven years, and was very depressed, so his psychiatrist admitted him for care. About a week later, a psychiatrist for the HMO (Merit) phoned the admitting physician and said the patient had used up his hospital days, although he had not reached the HMOs limit. After discharge, the patient went home, drank half a gallon of antifreeze and died eight days later. A lawsuit has been filed charging that the HMO decision to end hospital care for the patient led to his death. Although there is no federal statute allowing such patient protection (Newt sided with the insurance industry and killed the bill), Texas does have a patient protection act (as does Hawaii), so this case is being watched nationwide. The HMO argument is that they shouldn't be liable for medical malpractice because they only determine insurance coverage. "They are quite clearly practicing medicine," said Robert Denney, M.D. a Fort Worth psychiatrist familiar with the case. Interestingly, the Texas law has been in place since September 1997, and this is the first lawsuit, not the flood of claims that HMO attorneys predicted.

Every Family Needs At Least Two Cars. Ask The Man Who Owns One.

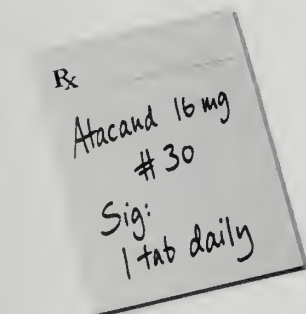
For two years in a row (1996 - 97) the top cars being stolen in America - (fanfare) - Honda Accord, Toyota Camry, Oldsmobile Cutlass, Honda Civic and Ford Mustang. So, when shopping for a new vehicle, remember that a stolen vehicle is not merely an inconvenience, but also the auto insurance can be several times that of other less desirable wheels.

Addenda

- ❖ Like gentlemen, mosquitos prefer blonds.
 - ❖ You have the same chance of winning the lottery whether you play or not.
 - ❖ Restaurant on the moon -- good food, but no atmosphere.
- Aloha and keep the faith — rts ■

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- Convenient once-daily dosing for 24-hour BP reduction
- Usual starting dose: 16 mg once daily



NEW Once-A-Day **atacand**®
CANDESARTAN CILEXETIL

Please see adjacent brief summary of Prescribing Information.



References: 1. Reif M, White WB, Fagan TC, et al. Effects of candesartan cilexetil in patients with systemic hypertension. *Am J Cardiol* 1998;82:961-965. 2. Farsang C, Kawecka-Jaszcz K, Langan J, et al. Antihypertensive effects and tolerability of candesartan cilexetil, amlodipine, and their combination. *Am J Hypertens* 1997;10:80A. Abstract H13. 3. Franke H. Antihypertensive effects of candesartan cilexetil, enalapril and placebo. *J Hum Hypertens* 1997;11(suppl 2):S61-S62.

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BRIEF SUMMARY

Before prescribing, please see full Prescribing Information for ATACAND.

USE IN PREGNANCY

When used in pregnancy during the second and third trimesters, drugs that act directly on the renin-angiotensin system can cause injury and even death to the developing fetus. When pregnancy is detected, ATACAND should be discontinued as soon as possible. See WARNINGS, Fetal/Neonatal Morbidity and Mortality.

ATACAND® (candesartan cilexetil) was effective in reducing blood pressure regardless of race, although the effect was somewhat less in blacks (usually a low-renin population).

CONTRAINDICATIONS: ATACAND is contraindicated in patients who are hypersensitive to any component of this product.

WARNINGS: Fetal/Neonatal Morbidity and Mortality: Drugs that act directly on the renin-angiotensin system can cause fetal and neonatal morbidity and death when administered to pregnant women. Several dozen cases have been reported in the world literature in patients who were taking angiotensin converting enzyme inhibitors. When pregnancy is detected, ATACAND should be discontinued as soon as possible. The use of drugs that act directly on the renin-angiotensin system during the second and third trimesters of pregnancy has been associated with fetal and neonatal injury, including hypotension, neonatal skull hypoplasia, anuria, reversible or irreversible renal failure, and death. Oligohydramnios has also been reported, presumably resulting from decreased fetal renal function; oligohydramnios in this setting has been associated with fetal limb contractures, craniofacial deformation, and hypoplastic lung development. Prematurity, intrauterine growth retardation, and patent ductus arteriosus have also been reported, although it is not clear whether these occurrences were due to exposure to the drug. These adverse effects do not appear to have resulted from intrauterine drug exposure that has been limited to the first trimester. Mothers whose embryos and fetuses are exposed to an angiotensin II receptor antagonist only during the first trimester should be so informed. Nonetheless, when patients become pregnant, physicians should have the patient discontinue the use of ATACAND as soon as possible. Rarely (probably less often than once in every thousand pregnancies), no alternative to a drug acting on the renin-angiotensin system will be found. In these rare cases, the mothers should be apprised of the potential hazards to their fetuses, and serial ultrasound examinations should be performed to assess the intra-amniotic environment. If oligohydramnios is observed, ATACAND should be discontinued unless it is considered life saving for the mother. Contraction stress testing (CST), a nonstress test (NST), or biophysical profiling (BPP) may be appropriate, depending upon the week of pregnancy. Patients and physicians should be aware, however, that oligohydramnios may not appear until after the fetus has sustained irreversible injury. Infants with histories of *in utero* exposure to an angiotensin II receptor antagonist should be closely observed for hypotension, oliguria, and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion. Exchange transfusion or dialysis may be required as means of reversing hypotension and/or substituting for disordered renal function. There is no clinical experience with the use of ATACAND in pregnant women. Oral doses ≥ 10 -mg candesartan cilexetil/kg/day administered to pregnant rats during late gestation and continued through lactation were associated with reduced survival and an increased incidence of hydronephrosis in the offspring. The 10-mg/kg/day dose in rats is approximately 2.8 times the maximum recommended daily human dose (MRHD) of 32 mg on a mg/m² basis (comparison assumes human body weight of 50 kg). Candesartan cilexetil given to pregnant rabbits at an oral dose of 3 mg/kg/day (approximately 1.7 times the MRHD on a mg/m² basis) caused maternal toxicity (decreased body weight and death) but, in surviving dams, had no adverse effects on fetal survival, fetal weight or on external, visceral, or skeletal development. No maternal toxicity or adverse effects on fetal development were observed when oral doses up to 1000-mg candesartan cilexetil/kg/day (approximately 138 times the MRHD on a mg/m² basis) were administered to pregnant mice. **Hypotension in Volume- and Salt-Depleted Patients:** In patients with an activated renin-angiotensin system, such as volume- and/or salt-depleted patients (e.g., those being treated with diuretics), symptomatic hypotension may occur. These conditions should be corrected prior to administration of ATACAND, or the treatment should start under close medical supervision. If hypotension occurs, the patients should be placed in the supine position and, if necessary, given an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further treatment which usually can be continued without difficulty once the blood pressure has stabilized.

PRECAUTIONS: General: Impaired Renal Function: As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals treated with ATACAND. In patients whose renal function may depend upon the activity of the renin-angiotensin-aldosterone system (e.g., patients with severe congestive heart failure), treatment with angiotensin converting enzyme inhibitors and angiotensin receptor antagonists has been associated with oliguria and/or progressive azotemia and (rarely) with acute renal failure and/or death. Similar results may be anticipated in patients treated with ATACAND. In studies of ACE inhibitors in patients with unilateral or bilateral renal artery stenosis, increases in serum creatinine or blood urea nitrogen (BUN) have been reported. There has been no long-term use of ATACAND in patients with unilateral or bilateral renal artery stenosis, but similar results may be expected. **Information for Patients: Pregnancy:** Female patients of childbearing age should be told about the consequences of second- and third-trimester exposure to drugs that act on the renin-angiotensin system, and they should also be told that these consequences do not appear to have resulted from intrauterine drug exposure that has been limited to the first trimester. These patients should be asked to report pregnancies to their physicians as soon as possible. **Drug Interactions:** No significant drug interactions have been reported in studies of candesartan cilexetil given with other drugs such as glyburide, nifedipine, digoxin, warfarin, hydrochlorothiazide, and oral

contraceptives in healthy volunteers. Because candesartan is not metabolized by the cytochrome P450 system and has no effects on P450 enzymes, interactions with drugs that inhibit, or are metabolized by, those enzymes would not be expected. **Pregnancy: Pregnancy Categories C (first trimester) and D (second and third trimesters):** See WARNINGS, Fetal/Neonatal Morbidity and Mortality. **Nursing Mothers:** It is not known whether candesartan is excreted in human milk, but candesartan has been shown to be present in rat milk. Because of the potential for adverse effects on the nursing infant, a decision should be made whether to discontinue nursing or discontinue the drug, taking into account the importance of the drug to the mother. **Pediatric Use:** Safety and effectiveness in pediatric patients have not been established. **Geriatric Use:** Of the total number of subjects in clinical studies of ATACAND® (candesartan cilexetil), 21% were 65 and over, while 3% were 75 and over. No overall differences in safety or effectiveness were observed between these subjects and younger subjects, and other reported clinical experience has not identified differences in responses between the elderly and younger patients, but greater sensitivity of some older individuals cannot be ruled out. In a placebo-controlled trial of about 200 elderly hypertensive patients (ages 65 to 87 years), administration of candesartan cilexetil was well tolerated and lowered blood pressure by about 12/6 mmHg more than placebo.

ADVERSE REACTIONS: ATACAND has been evaluated for safety in more than 3600 patients/subjects, including more than 3200 patients treated for hypertension. About 600 of these patients were studied for at least 6 months and about 200 for more than at least 1 year. In general, treatment with ATACAND was well tolerated. The overall incidence of adverse events reported with ATACAND was similar to placebo. The rate of withdrawals due to adverse events in all trials in patients (7510 total) was 3.3% (i.e., 108 of 3260) of patients treated with candesartan cilexetil as monotherapy and 3.5% (i.e., 39 of 1106) of patients treated with placebo. In placebo-controlled trials, discontinuation of therapy due to clinical adverse events occurred in 2.4% (i.e., 57 of 2350) of patients treated with ATACAND and 3.4% (i.e., 35 of 1027) of patients treated with placebo. The most common reasons for discontinuation of therapy with ATACAND were headache (0.6%) and dizziness (0.3%). The adverse experiences that occurred in placebo-controlled clinical trials in at least 1% of patients treated with ATACAND and at a higher incidence in candesartan cilexetil (n=2350) than placebo (n=1027) patients included back pain (3% vs. 2%), dizziness (4% vs. 3%), upper respiratory tract infection (6% vs. 4%), pharyngitis (2% vs. 1%), and rhinitis (2% vs. 1%). The following adverse experiences occurred in placebo-controlled clinical trials at a more than 1% rate but at about the same or greater incidence in patients receiving placebo compared to candesartan cilexetil: fatigue, peripheral edema, chest pain, headache, bronchitis, coughing, sinusitis, nausea, abdominal pain, diarrhea, vomiting, arthralgia, albuminuria. Other potentially important adverse events that have been reported, whether or not attributed to treatment, with an incidence of 0.5% or greater from the more than 3200 patients worldwide treated with ATACAND are listed below. It cannot be determined whether these events were causally related to ATACAND. **Body as a Whole:** asthenia, fever; **Central and Peripheral Nervous System:** paraesthesia, vertigo; **Gastrointestinal System Disorders:** dyspepsia, gastroenteritis; **Heart Rate and Rhythm Disorders:** tachycardia, palpitation; **Metabolic and Nutritional Disorders:** creatine phosphokinase increased, hyperglycemia, hypertriglyceridemia, hyperuricemia; **Musculoskeletal System Disorders:** myalgia; **Platelet/Bleeding-Clotting Disorders:** epistaxis; **Psychiatric Disorders:** anxiety, depression, somnolence; **Respiratory System Disorders:** dyspnea; **Skin and Appendages Disorders:** rash, sweating increased; **Urinary System Disorders:** hematuria. Other reported events seen less frequently included angina pectoris, myocardial infarction, and angioedema. Adverse events occurred at about the same rates in men and women, older and younger patients, and black and nonblack patients. **Laboratory Test Findings:** In controlled clinical trials, clinically important changes in standard laboratory parameters were rarely associated with the administration of ATACAND. **Creatinine, Blood Urea Nitrogen:** Minor increases in blood urea nitrogen (BUN) and serum creatinine were observed infrequently. **Hyperuricemia:** Hyperuricemia was rarely found (19 or 0.6% of 3260 patients treated with candesartan cilexetil and 5 or 0.5% of 1106 patients treated with placebo). **Hemoglobin and Hematocrit:** Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.2 grams/dL and 0.5 volume percent, respectively) were observed in patients treated with ATACAND alone but were rarely of clinical importance. Anemia, leukopenia, and thrombocytopenia were associated with withdrawal of one patient each from clinical trials. **Potassium:** A small increase (mean increase of 0.1 mEq/L) was observed in patients treated with ATACAND alone but was rarely of clinical importance. One patient from a congestive heart failure trial was withdrawn for hyperkalemia (serum potassium = 7.5 mEq/L). This patient was also receiving spironolactone. **Liver Function Tests:** Elevations of liver enzymes and/or serum bilirubin were observed infrequently. Five patients assigned to candesartan cilexetil in clinical trials were withdrawn because of abnormal liver chemistries. All had elevated transaminases. Two had mildly elevated total bilirubin, but one of these patients was diagnosed with Hepatitis A.

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Coronation Pavilion

Also used as a bandstand, the Coronation Pavilion was where King Kalakaua was crowned.



Editorial

Norman Goldstein MD
Editor

WORDS, WORDS, WORDS

At the time Hamlet was written, Shakespeare had 20,000 words available to express all through the English language. When President Lincoln made his famous, concise Gettysburg address, there were 114,000 English words from which to choose. Today we can find 600,000 words defined in Webster's Dictionary. When we add medical terminology and accepted words from other languages, our options have expanded forty fold since Shakespeare's time.

The late Dr. Harry L. Arnold, HMJ Editor for 41 years, was expert at using proper vocabulary. Some of my fondest controversial medical discussions appeared in print between Harry and the late NYU Professor of Dermatology, Dr. Morris Leider. It was Morris who called me the Semitic Semanticist (considered an honor, coming from him).

To communicate effectively, we often simplify our spoken language through idioms and contractions. So, instead of saying, "It is not efficacious to indoctrinate a superannuated canine with innovative maneuvers", we remark, "You can't teach an old dog new tricks." American shorthand speech reduces the phrase, "we need to dimensionalize this management initiative" to "Let's make a plan".

Simply put, let's make a plan to:

1. Keep sentences short
2. Pick simple words over complex ones
3. Choose familiar words instead of obscure ones
4. Avoid unnecessary words
5. Put action in our verbs
6. Write the way we talk
7. Use terminology that our patients can picture
8. Tie in with our patients' experience
9. Make full use of a variety of words
10. Write and speak to *express*, not *impress*¹

1. Trout, J and Rivkin, S. The Power of Simplicity, McGraw-Hill Inc. and Audiotech Business Book Summaries 1999.

Hepatitis C - Molecular Treatments and Liver Transplantation

The well designed study by Naoky C.S. Tsai, MD and Associates, "A Novel Treatment of Patients with Chronic Hepatitis C"¹ is an example of the future of medicine. Recombinant human Granulocyte Macrophage Colony-Stimulating-Factor will undoubtedly be used for other infections and conditions in the near future. As was evidenced at the recent "Genetics and Molecular Biology - From Discovery to Practice" seminar sponsored by the Queen's Medical Center and the Ohio State University (Feb. 22-24, 1999), the age of Molecular Biology is here now, and physicians must keep up with this exciting new field of medicine.

Hepatitis C was the main reason for the liver transplantations in Linda L. Wong MD *et al's* review. Hawaii's first liver transplant was

reported in our Special Issue on Organ Transplantation five years ago by Dr. Wong and associates.² They herein report on a total of 21 transplants, 20 currently alive.³

Mahalo to Hawaii's pioneers in medicine and surgery, Naoky, Linda and their associates.

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Special Contribution

Demanding Compliance with Living Wills

From the Honolulu Star-Bulletin, February 23, 1999

A.A. Smyser

Contributing Editor, Honolulu Star-Bulletin

Bill Perry's wife Pat, aged 88, as he is, looked up from a gurney at Queen's Hospital Emergency Room and told him, "I'm in horrible pain. Let me die."

In the dark of the morning soon after 5 a.m. on Dec. 31 she had been hit by a car while going to get the morning newspaper out of their mailbox in the Kahaluu area. He is a late sleeper and didn't know about it until a neighbor woke him with the news.

She was still on the street being tended by paramedics who came promptly. Perry followed the ambulance in his car. On the subject of death, Pat and Bill understood each other. They had plans for killing themselves when it seemed appropriate.

Bill knew his wife meant it when she asked to be allowed to die. He was able to get her living will faxed to the emergency room from Kaiser Koolau Clinic. A final paragraph gave him power of attorney to act for her.

He said he told the emergency personnel to get her out of pain or let her die. They said she wasn't terminal and that pain medication had to be withheld until they learned whether there was internal bleeding.

Then he did what he says he wouldn't do now - signed a form allowing surgery on her broken leg with bones protruding through the skin in order to get her pain relief.

Next time he saw her was in intensive care - unconscious and hooked up to an array of tubes and piping intended for life-saving efforts neither he nor she wanted.

When he asked to have the tubes disconnected he was told by a physician that would be euthanasia or murder.

The physician said it wasn't possible, even though Perry had his wife's living will and power of attorney and requested it. Even though friends at a hospital family conference, including their minister, supported his request. Even though their son, newly arrived from the mainland, supported it.

Finally after a second family conference following the arrival of

their daughter from the East Coast, the physician assented to see if Patricia Perry could breathe on her own without a respirator. This was Jan. 6, and she could. But the next day she died.

Bill, who had been willing to let her bleed to death a week earlier, got a bill for 18 pints of blood instead.

Bill now is on a crusade. He is outraged. He told his story at a state House of Representatives Health Committee hearing and will retell it wherever he thinks he can do some good. His documentation includes the bill for blood, the living will, the death certificate and the police report on how she was hit by a car whose 18-year-old had been trying to clear leaves from his windshield.

People in the Death With Dignity movement say William Perry is far from alone. Living wills regularly are ignored. Attorney Jeffrey Crabtree volunteered over 2,000 hours to draft living will legislation and fight for its enactment. His interest was spurred by his experience with his mother in a years-long coma after a hiking fall.

Crabtree says there are a lot of cases like the Perrys'. He alone is aware of a half dozen in the last few months.

The Star-Bulletin on Jan. 29 published a letter from JoAnn Goebert, whose late husband was both a physician and attorney. He lectured and wrote on the subject of living wills. He had a very specific living will, she said, yet compliance was delayed. Often a single word such as "reasonable" can create a question or doubt, she found.

Nationally, Hemlock Society U.S.A. is encouraging the formation of volunteer committees to help achieve compliance with living wills. The idea of suing those who don't comply is drawing favorable reactions.

A.A. Smyser is the Star-Bulletin's contributing editor. His column runs Tuesday and Thursday.

Editor's note:

Mahalo to the Honolulu Star-Bulletin for permission to reprint another "Hawaii's World" column from the pen of Contributing Editor A.A. "Bud" Smyser. No person in Hawaii has done more than he to support the efforts of both Hospice and Hemlock to assure the rights for each of us to choose death with dignity; the right to elect not only compassionate care, but the absence of pain in our transition from life to death.



Special Contribution

The Role of the Physician in Handicapped Parking

John A. Sheedy MD

For several years Handicapped Parking has been available in all of the public parking areas throughout the City and County of Honolulu, as well as the neighbor islands in accordance with the

Hawaii Revised Statutes (Section 291.54). Similar provisions have also been enacted throughout the United States and reciprocity exists between states.

Handicapped is defined as having a medical condition that limits mobility to 200 feet without stopping to rest due to an arthritic, neurological, or orthopedic disorder. In another disorder, individuals that meet the Class III or IV category for cardiac disease or those that have severe respiratory disorder such that the forced expired volume, one second (FEV1) is less than one liter, or have an oxygen level (PO2) of less than 60 mm Hg. and requires the use portable oxygen. The final category involves those that have prosthetic, extremity devices, braces, crutches, walkers, wheelchairs, canes or the help of another person with ambulation.

Currently there are 22,000 individuals that have been certified by their physicians as meeting the above criteria for either temporary (up to six months or the red placard) or the long term (five year or blue placard) disabled parking category. Each individual is issued a laminated card to accompany the placard. At present there are 8,000 stalls that have been designated with the characteristic white wheelchair on a blue field and also marked with an upright visible sign.

Since the presence of handicapped stalls gives the handicapped a distinct advantage in parking near the entrance to most buildings and stores, it was natural that non-handicapped individuals would take advantage of these spaces. Many complaints were registered to the Honolulu Police Department, but checking these spaces was time consuming and was given a low priority by the HPD. After considerable discussion by the City Counsel and the Legislature, the idea of using volunteers was suggested. The Oahu Veterans Council was approached to provide volunteers. The present program was established by the HPD to provide training and equipment for these individuals. Currently there are twenty-five enforcement officers, most of whom will be completing two years of service in the near future. The individuals usually work in pairs and are expected to patrol selected areas at least two hours per week. Volunteer Officers are not paid, but may claim mileage when on duty. Volunteers are visible because they have been issued a dark blue vest with a Handicap logo as well as a laminated card with picture indicating their status. Volunteers are expected to be courteous, correct and not to engage motorists in discussion or argumentation. Fines that are imposed are \$150.00 if paid within ten days and after that a judgment of \$160.00 or more may be imposed.

As physicians you are the key to making a determination whether an individual is handicapped. The criteria are sufficiently clear that only those who meet these criteria should be so designated. If you have any questions, I may be reached at 692-8109.

Editor's Note:

John Sheedy MD is a medical consultant to the State of Hawaii, Department of Human Services. He is also a Fellow of the American Academy of Physicians, and past president of the Hawaii Society of Internal Medicine.

With the establishment of handicapped parking permits and reserved parking, Dr. Sheedy was commissioned as a Special Officer for Handicapped Parking with the Honolulu Police Department.

Thank you for this Special Contribution to our Journal, Dr. Sheedy.

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Bayanihan Clinic Without Walls Project

The Bayanihan Clinic Without Walls is a community-based immigrant health services which was initiated by the Philippine Medical Association of Hawaii (PMAH) on April 17, 1997. The President of PMAH was Dr. Charlie Sonido. This was designed to provide free medical services to newly-arrived immigrants to the State. These immigrants are: 1). Those who arrived after August 22, 1996, who were excluded from MedQuest Services, 2). Those without medical insurance and 3). Those who are financially indigent (fall under the Medicaid guidelines). The project makes use of a single health needs/evaluation and referral system, an activity of the Lanakila Easy Access Project (LEAP) under the Office of Bilingual Health Services, State Department of Health. This program is located at Lanakila Health Center with bilingual/bicultural staffs. The immigrants, who need health services which are not provided by the State Department of Health are referred to the volunteer physicians at their private offices. The majority of the immigrants to Hawaii are from the Asian countries and the Pacific Islands.

In March 1997, flyers were sent to physicians requesting their assistance to volunteer their services. The initial response was very positive. There were 30 physicians representing eight specialties and various ethnicities, such as, Chinese, Filipino and Caucasian. The project was featured in an article of the Hawaii Filipino Chronicle on March 16, 1997 issue.

On April 17, 1997, PMAH initiated the project. In October 1997, the project included two volunteer dentists to assist immigrants with dental problems. From April 17 to December 1997, the volunteer physicians and dentists provided needed health services to 319 recently-arrived immigrants.

In 1998, the volunteer physicians and dentists increased to 49 representing 13 specialties and additional ethnicities, such as, Vietnamese, Egyptian and Samoan. On October 30, 1998, Dr. Ruben Guerrero, President, PMAH, and Dr. Lawrence Miike, Director, State Department of Health acknowledged the valuable humanitarian volunteer services of the physicians and dentists at a recognition dinner held at Hale Koa Hotel. Certificates of Appreciation were awarded. Following is our current roster.

During the 1998 calendar year, there were 438 immigrants who were referred to the volunteer physicians and dentists. The Bayanihan Clinic Without Walls is now a non-profit corporation. We are looking forward for the participation of more volunteer physicians. This project is a demonstration of one of the models that show how medicine and public health collaboration can respond to the health needs of a vulnerable segment of our population in need.

Your readers may call me at 832-5685, for further information.

Herita A. Yulo, MD, MPH, CHES, MS
Program Manager/Director

BAYANIHAN CLINIC WITHOUT WALLS VOLUNTEER PHYSICIANS

GENERAL/FAMILY PRACTICE	Elmer Baysa, M.D.	ORTHOPEDIC SURGERY	Glorifin Belmonte, M.D.
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Ramon Pajarillo, M.D.	Maria Ilar, M.D.		Efren Baria, M.D.
Russell Tacata, M.D.	Harry Acuna, M.D.	OBSTETRICS/GYNECOLOGY	
Hilarion Dayoan, M.D.		Redentor Rojas, M.D.	PHYSICAL MEDICINE (PAIN MANAGEMENT)
Kiliem Nguyen, M.D.	PEDIATRICS	Emma B. Avilla, M.D.	Robert Hyman, M.D.
Benjamin Gozun, III, M.D.	May Ablan, M.D. (Allergy)	OPHTHALMOLOGY	
	Araceli Asuncion, M.D.	George Camara, M.D.	
INTERNAL MEDICINE	Amelia Jacang, M.D.	UROLOGY	DENTAL
Charlie Sonido, M.D.	Elizabeth Abinsay, M.D.	Antonio Tan, M.D.	Neal Timon, D.D.S (Peds)
Danilo Ablan, M.D.	Perlita Lampitoc, M.D.		Rosemarie Mauricio-Molina, D.D.S. (Adult)
Erlinda Cachola, M.D.	Flora Medina-Manuel, M.D.	EAR, NOSE & THROAT	
Fortunato Elizaga, M.D.	Edgar Dela Cruz, M.D.	Ramon Sy, M.D.	
Corazon Hobbs, M.D.	Sorbella Guillermo, M.D.		
Danilo Canete, M.D.	Benilda Luz, M.D.	RADIOLOGY	
Aurora Mariani, M.D.		Romeo Pineda, M.D.	
Sorbella Guillermo, M.D.	SURGERY	PSYCHIATRY	
Reuben Guerrero, M.D. (Oncology)	Patricia Chinn, M.D.	Danilo Ponce, M.D.	
Nicanor Joaquin, M.D.	Bradley Wong, M.D.		
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The Roles of Athletic Trainers and Physical Therapists in Sports Medicine

Andrew W. Nichols MD

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Sports medicine and athletic health care is ideally practiced using a multidisciplinary team care approach. In addition to physicians, who are often sports medicine fellowship-trained specialists in family practice, orthopaedic surgery, internal medicine, or pediatrics, members of the sports medicine team include athletic trainers, physical therapists, exercise physiologists, psychologists, dentists, podiatrists, and alternative/complementary medicine practitioners. A discussion of the history of sports medicine and physician educational opportunities in sports medicine previously appeared in this publication.¹ The current article describes the similarities and differences between athletic trainers and physical therapists and the synergistic roles they can play with physicians in the delivery of athletic health care.

Athletic Trainers

Of the 22,700 National Athletic Trainers' Association (NATA) members, 92% are NATA-certified and 44% are female. In 1990, the AMA recognized athletic training as an allied health profession, and in June 1998, adopted a policy calling for NATA-certified athletic trainers (ATCs) in all high school athletic programs. Educational standards to achieve certification as an athletic trainer, which are set by the NATA Board of Certification, include a minimum of a Bachelor's degree, extensive appropriately supervised clinical affiliations with athletic teams, and successful completion of written and oral examinations. The athletic training educational curriculum includes: 1) athletic injury prevention; 2) recognition, evaluation, and immediate care of athletic injuries; 3) rehabilitation and reconditioning of athletic injuries; 4) health care administration; and 5) professional development and responsibilities.

In 1997, the state of Hawaii demonstrated national leadership in recognizing the importance of athletic trainers by being the first state to place full-time ATCs in all public high schools. A 1991 survey by Buxton and colleagues found that only 8% of state high schools (all were private schools) employed full-time certified athletic trainers.² Athletic health care in the public schools was typically delivered by non-certified athletic trainers and coaches, many of whom lacked training in even CPR and basic first aid. The survey findings prompted the Hawaii Interscholastic Athletic Directors' Association (HIADA) to launch a campaign to place certified athletic trainers in all public high schools. The HIADA lobbied the Hawaii state legislature, which agreed to fund \$371,000 to initiate a pilot program placing ATCs in 15 of Hawaii's 40 public high schools for the 1993-94 school year. Expansion of the program to supply ATCs

to the remaining high schools became threatened however, due to the limited tax revenues which resulted from a state economic downturn. In 1997, the Hawaii Athletic Trainers' Association (HATA) Public Relations Committee thus spearheaded a campaign to rekindle interest in the growth of athletic training public high school positions. Lobbying efforts included HATA members sharing national and state injury statistics as well as providing the financial breakdown of potential health care savings brought on by athletic trainers, and high school athletic directors describing pending and potential lawsuits based upon inappropriate athletic health care. The Hawaii Medical Association Sports Medicine Committee also testified in support of the bill. The collaborative efforts proved successful, as the state legislature appropriated funding for full-time certified athletic trainers in all Hawaii public high schools for the 1997-98 school year.³

The University of Hawaii at Manoa (UHM) offers a bachelor's degree level athletic training education program, directed by Iris Kimura, PhD, ATC, PT, in the College of Education's Department of Kinesiology and Leisure Science (formerly HPER). Athletic training students may currently become certified as ATCs by completing either a NATA-accredited "curriculum-based" program or a non-accredited "internship-based" program. Both pathways involve classroom study and supervised association with athletic teams, with the accredited curriculum programs requiring relatively more classroom study and less clinical time than the traditional internship route. After 2003, only NATA-accredited curriculum programs will be recognized for certification. The UHM athletic training program is currently seeking NATA-accreditation for its Bachelor's degree program and the addition of a Master's level program. Most of the state high school athletic training positions have been filled and the majority are occupied by graduates of UHM's athletic training education program.

Physical Therapists

Physical therapy (PT) as a profession grew out of the need for PT services during the 1940s and 1950s due to World War II and the great polio epidemic. The American Physical Therapy Association (APTA), which was established early in the century, currently has more than 75,000 members. The minimal educational requirement for PT certification includes a Bachelor's degree, but increasingly many PTs are choosing to receive Master's degrees. Of the 180 colleges and universities in the United States which offer APTA-accredited educational programs in physical therapy, none is located in the state of Hawaii. In the early 1990s, the John A. Burns School of Medicine explored the possibility of establishing a PT program at UHM, but due to budget restrictions the program failed to emerge. UH Kapiolani Community College currently offers a two-year physical therapy assistant (PTA) program.

Differences Between Athletic Trainers and Physical Therapists

A simple description of the difference between an ATC and a PT is that ATCs are "emergency athletic care specialists" and PTs are "rehabilitation specialists." The ATC's educational training emphasizes sports medicine, orthopaedics, and athletic care, while the PT is trained as a rehabilitation generalist who is exposed to all sorts of physical medicine topics including neurologic injury, sports medicine and orthopaedics, prosthetics, community health, and industrial/physical medicine. The broad training of a PT may result in a

relatively limited sports medicine education experience. In recognition of the desires of some PTs to study certain areas further, the APTA grants subspecializations in fields such as sports PT and neurologic PT.

Another important difference between ATCs and PTs has to do with "access" to patients. Approximately half of the states allow physical therapists to have direct access to patients, meaning that a PT does not need a physician's referral to treat and evaluate a patient. Hawaii is among the states which do require physician referrals for PTs to initiate treatment. On the other hand, ATCs—especially those involved with athletic team care—often have direct access to patients, since ATCs are frequently the first person to evaluate an injured or ill athlete. Consequently, the ATC is given the responsibility of determining whether a physician referral is indicated. Unlike PTs however, ATCs are not permitted to formulate individual treatment plans for patients.

Professional licensure requirements also differ significantly between the two professions. PTs are licensed in all states, while ATCs may become licensed in only half of the states. With the exception of Texas, states which offer licensure for ATCs, utilize NATA-certification as a requirement to achieve licensure. Hawaii currently offers no licensure for ATCs.

Perhaps the most profound contrast between PTs and ATCs involves relative abilities to independently bill third-party health

insurance payers for professional services provided. PTs may bill for their services in all states. ATCs have attained such financial reimbursement capabilities in only a few states—all of which require ATC licensure. The NATA is actively attempting to achieve professional status and third-party billing parity for its members with that of PTs by raising athletic training academic standards and encouraging state ATC licensure.

Job opportunities also differ for ATCs and PTs. Approximately 30% of PTs work in hospital settings, while the rest work in such outpatient facilities as private PT offices, community health centers, sports facilities, corporate/industrial health centers, research centers, rehabilitation centers, nursing homes, and home health agencies. ATCs rarely work in hospital settings and have relatively few opportunities for self-employment. Nationwide, the majority of newly trained ATCs are hired by orthopaedic sports medicine clinics where they may participate in sports injury evaluation, rehabilitation, and athletic team care. Many other ATCs are employed by high schools, colleges, and professional sports teams.

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POSTPONEMENT OF CLOSING DATE FOR RECEIPT OF PROPOSALS AND REVISIONS TO REQUEST FOR PROPOSALS



NOTICE is hereby given that the CLOSING DATE scheduled for 4:30 pm on April 5, 1999 by the Employees' Retirement System of the State of Hawaii, at 201 Merchant Street, Suite 1400, Honolulu, HI 96813, for Request for Proposals, No. ERS 99-02 for Competitive Sealed Proposals to be Chairperson and Members of the Medical Board of the Employees' Retirement System as advertised in the March 1999 issue of the Hawaii Medical Journal has been postponed to 4:30 pm May 14, 1999. Proposals received after this date will not be considered.

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A Novel Treatment of Patients with Chronic Hepatitis C

Naoky C.S. Tsai MD, Neil Shimoda MD, Linda Wong MD, Stanley Shimoda MD,
Kimberly Goad RN, Herbert Yee, Miles Chen

Abstract:

Objectives: Interferon alpha-2b therapy for Chronic Hepatitis C patients has been unsatisfactory. Recombinant Granulocyte Macrophage Colony-Stimulating Factor has been shown to have anti-viral effects in vivo and in vitro via cytokines release.^{1,2,3} Recently its effects on chronic hepatitis B and possibly chronic hepatitis C were reported.^{4,5} We, decided to conduct a pilot study to evaluate the anti-viral effects of recombinant human GM-CSF mono-therapy in patients with chronic hepatitis C and to assess its side effects.

Methods: A total of 10 patients (male/female: 5/5) (age: 34-60, mean: 45) seen in our center between 2/95 to 2/96 were randomly selected to receive recombinant human Granulocyte Macrophage Colony-Stimulating-Factor at 125 ug/m2 subcutaneously daily for two weeks followed by three times weekly for another 8 weeks. Biochemical (ALT) and viral (HCV-RNA) responses were measured prior to treatment and at weeks four and eight. Side effects were recorded.

Results: Six out of the ten patients treated had significant viral reduction but none became negative. Eight out of the ten patients treated showed biochemical improvement and three out of the eight had normalized liver enzymes. Age, sex, stage of the disease did not influence the response but there seems to be a tendency for patients with higher pre-treatment viral level to respond virally. Side effects are minimal and well-tolerated.

Conclusion: Recombinant human Granulocyte Macrophage Colony-Stimulating-Factor in the dose used has anti-viral effects in the majority of the chronic hepatitis C patients studied. Side effects are minimal and well tolerated. Further study with higher doses and longer duration is needed to prove its clinical efficacy in treating patients with chronic hepatitis C.

Introduction:

In the past few years since interferon alpha 2-b (IFN) was licensed for treatment of some patients with chronic hepatitis C, it has become clear that standard IFN therapy (3 million units subcutaneously three times a week) produces a complete biochemical response in 50% of patients (normalization of ALT at the end of treatment); however, the majority of responders relapsed after termination of therapy. To improve these results, many therapies have been tried including retreatment with same dose or escalating

interferon dosage, iron depletion therapy, and prolonged interferon therapy, but the beneficial results have not yet been established.

Among the different groups of biological response modifiers, GM-CSF (Granulocyte Macrophage-Colony Stimulating Factor) is a hormone-like glycoprotein cytokine produced by activated T lymphocytes, endothelial cells and fibroblasts that stimulates the proliferation, maturation and function of hemopoietic cells, augments and modifies the immune system, and regulates the secretion of other cytokines which are involved in the immune response to viral hepatitis. Recently J. Martin. et al reported HBV-DNA level reduction with GM-CSF alone or in combination with interferon alpha-2b.² Furthermore, in vitro studies of cytokine production by PBMC(peripheral blood mononuclear cells) during GM-CSF treatment revealed enhanced spontaneous production of other cytokines.¹

In the treatment of chronic hepatitis C, recombinant GM-CSF has been used mainly to rescue leukopenic patients during treatment with interferon alpha 2-b. There has been no clinical study in the U.S. to investigate if recombinant GM-CSF by itself has any anti-viral effect against hepatitis C virus. Therefore we decided to conduct a pilot study treating chronic hepatitis C patients who failed previous interferon alfa 2-b therapy with recombinant GM-CSF alone to observe if there is any anti-HCV effect and to assess its side effects.

Patients and Methods:

Ten patients (five males) with a mean age of 45 yr. (Range 34-60) who were seen in a tertiary center between 2/95 to 2/96 were selected to participate in this trial. The patient's clinical characteristics can be seen in Table I. All patients had failed previous interferon therapy and were off interferon or other immunological therapy for at least six months and met the inclusion and exclusion criteria. The protocol was approved by the IRB of the institution. Consent forms were signed. After the initial screening visit, all participants received recombinant GM-CSF (manufactured by Immunex Co. Seattle, Washington) at 125 ug/m2 subcutaneously daily for two weeks followed by three times a week for another eight weeks. Biochemical (ALT) and viral response (b-DNA method from Chiron Inc. Summerville, California) were assessed prior to treatment and at week four and eight. Side effects were assessed in each follow-up visit and recorded.

Results:

Of the ten patients treated with GM-CSF, six had significant viral titer reduction during the first two weeks of daily subcutaneous injection. However, none had eradicated the virus. Eight out of the

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Table 1.— Patient Characteristics

Patient	Sex	Age	Genotype	Histology	PreRx RNA (10 ³)
D.H.	M	57	1b	CAH	>570
E.J.	F	35	1a	CPH	326.9
F.T.	M	42	1a	CPH	68.6
F.R.	M	45	?	CAH	41.8
L.Y.	F	59	1b	Cirrhosis	167.5
K.G.	F	34	1a	CPH	188.1
M.L.	F	49	4a	Cirrhosis	Not Done
O.D.	M	35	3a	CPH	133.7
R.J.	M	39	2b	Cirrhosis	<3.5
S.L.	F	60	1b	CPH	46.9

CAH = Chronic Active Hepatitis

CPH = Chronic Persistent Hepatitis

ten treated showed ALT improvement and among them three had normalized ALT. The clinical data of all ten patients are shown in Table I. Three are genotype 1a, three type 1b, one type 2b and three untypable. Six patients had advanced liver disease and the remaining four had mild to moderate disease. Age, sex, stage of disease did not influence the response but there seems to be a tendency for patients with higher viral level to respond. Fig. I, Fig. IIa and IIb show mean HCV-RNA and ALT level of each patient respectively.

Side effects were minimal and well tolerated. The most common side effect was injection site irritation. Other side effects included flu-like symptoms (which were milder than that of interferon alpha 2-b) and general malaise. Two patients experience urticaria which responded to anti-histamine treatment. No cardiopulmonary side effects such as CHF or asthma attack were noted. Leukocytosis responses were universal and several patients had eosinophilia (up to 40% in one case with urticaria) but dose reduction was not needed.

Discussion:

Interferon therapy for chronic hepatitis C has been unsatisfactory in attaining sustained response in the majority of patients. Clearly enhancement of the response rate is needed. Of all the anti-viral therapies, interferons were the only agents shown to have anti-viral effect on hepatitis C virus. Ribavirin and Corticosteroids as monotherapy have been tested but without success in eradication of

Figure I.— HCV-RNA Level Changes During Treatment (x100,000 Copies/ml.) Patient's HCV-RNA level pre- and during GM-CSF therapy. No patient has eradicated HCV-RNA but there seems to be a downward trend in the level of HVC-RNA especially in the first four weeks of therapy when daily GM-CSF was administered. (Chiron version 1.0 Quantiplex method).

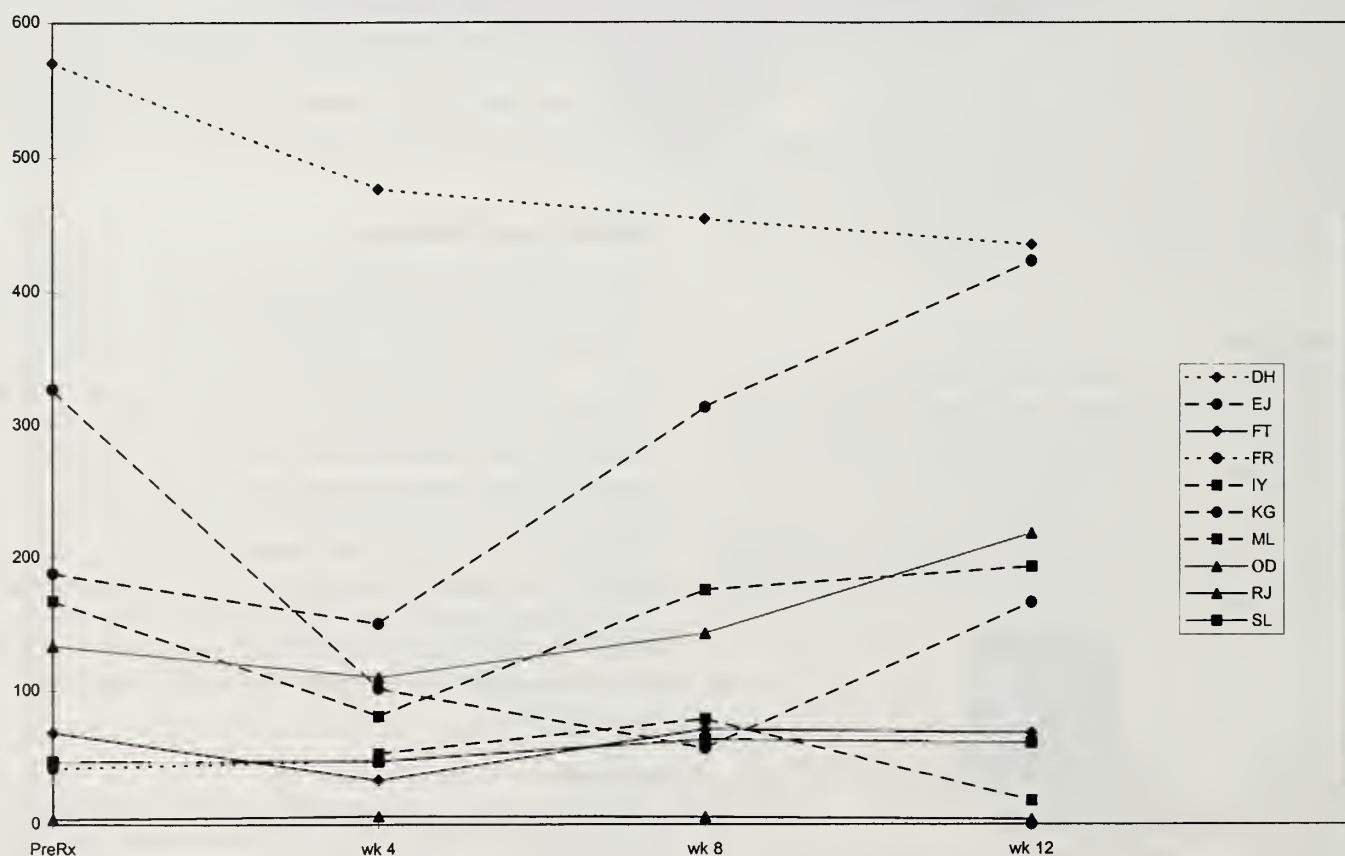


Figure IIa.— ALT Levels (I.U./ml) (ALT level of five patients during treatment.)

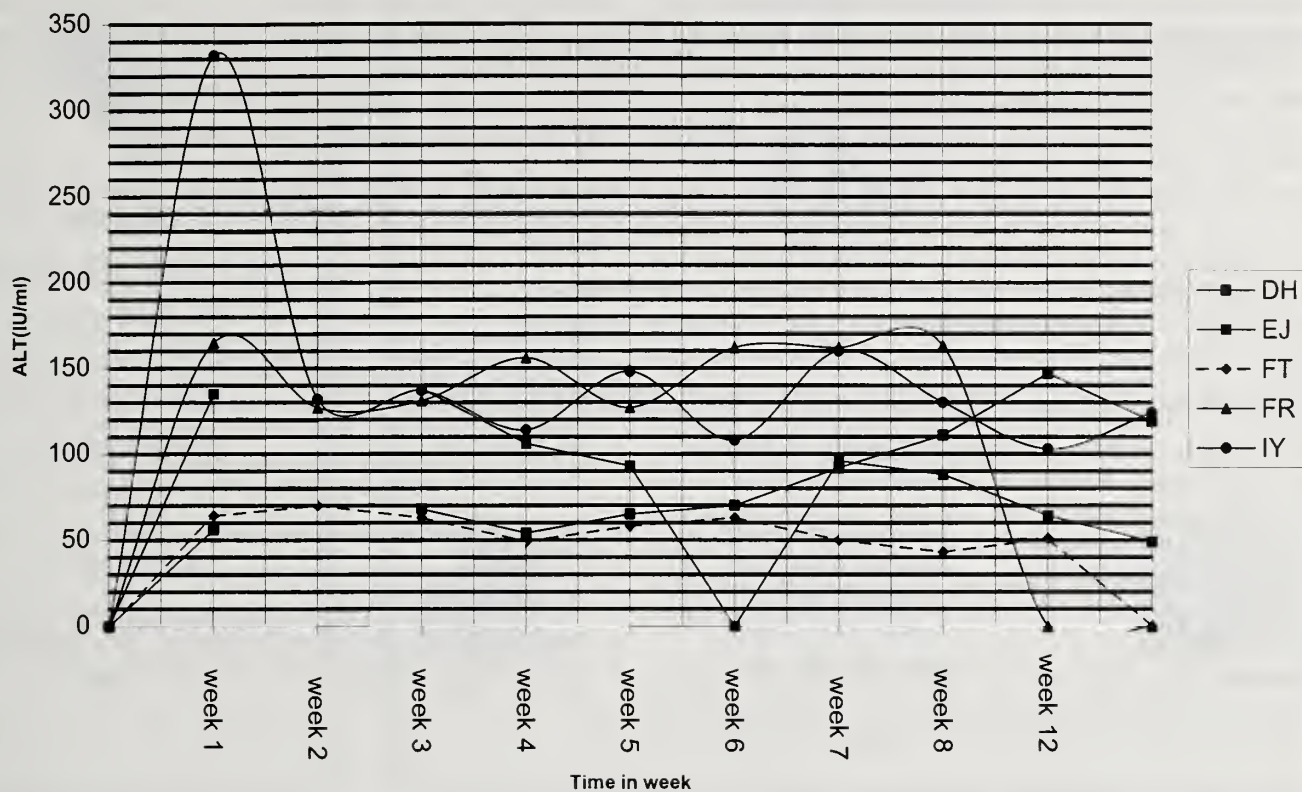
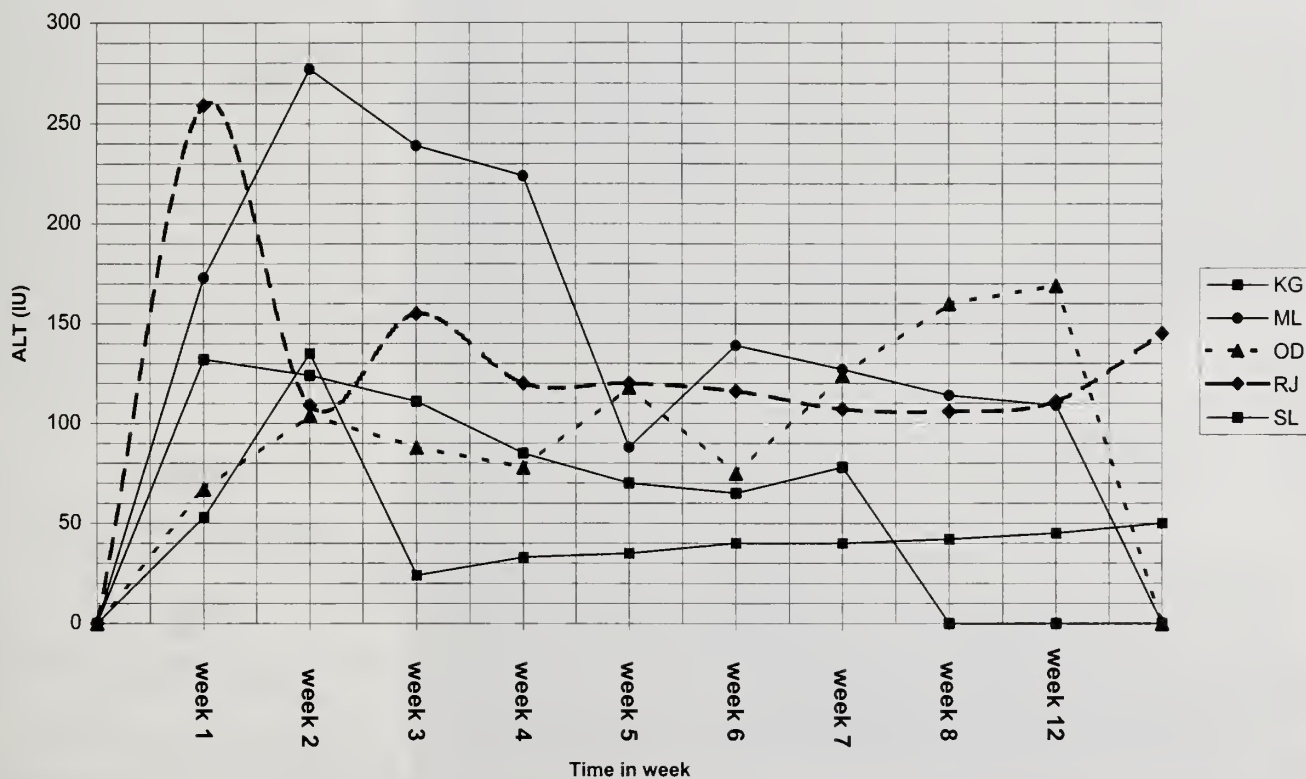


Figure IIb.— ALT Levels (I.U./ml) (ALT of another five patients during treatment.)



the virus. GM-CSF has been used to rescue patients with leukopenia on high dose interferon therapy⁴ but its efficacy as monotherapy for the treatment of chronic hepatitis C has not been tested. In this study we administered rhGM-CSF to ten patients who have failed previous interferon alpha 2-b treatment to study its anti - HCV effect and to assess side effects. The dosage given is low at 125 mcg/m2 subcutaneously. The therapy was well tolerated with no significant side effects. No dose reduction was needed and no patient withdrew from the study. The leukocytosis occurred as expected and eosinophilia was observed in two patients. Local injection site irritation was common but generally manageable. Other side effects such as flu-like symptoms were much milder compared to that of the interferon therapy these patients had experienced previously, even during the daily rhGM-CSF administration in the first two weeks of the trial.

The reduction in the viral RNA during the treatment was significant in the majority of the patients especially during the daily dosing period. ALT was also noted to have improved in eight of the ten patients with normalization in three patients. These effects may be due to cytokine production by the GM-CSF effect. GM-CSF has been shown to increase the liberation of TNF-alpha (Tumor Necrosis Factor Alpha), Interleukin-2^{1,2,3} which themselves have potent antiviral activity.^{6,7,8}

In summary, the administration of rhGM-CSF in the doses used is safe and well tolerated. The treatment seems to exert an anti-viral

effect on patients with chronic hepatitis C infection. Future studies with higher dosage and longer duration of therapy or in combination with interferon therapy are needed to prove its clinical efficacy as an alternative and/or adjuvant therapy for patients with chronic hepatitis C. GM-CSF could also play a role in the treatment of those patients with chronic hepatitis C who have significant leukopenia and were excluded from interferon therapy.

Acknowledgment: The authors would like to thank Dr. Rodney Williams for his idea and helpful criticism, to Mr. Peter Hsin and Ms. Sharon Lai for their technical assistance.

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Liver Transplantation in Hawaii: The initial five years

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Abstract

Twenty-one liver transplants have been performed in Hawaii in the initial five years. Hepatitis C was the most common reason for liver transplant. Twenty patients are currently alive, and 93.3% of patients survived one year. Of those one year post transplant, 60% have returned to work. Liver transplant can be performed in Hawaii with results comparable to mainland centers.

Methods and Materials

This is a retrospective review of patients who underwent liver transplant at St. Francis Medical Center from May 1993 to May 1998. Records were reviewed for demographic data, etiology of liver disease, status at the time of transplant, length of surgery, amount of blood transfused, length of intensive care unit (ICU) and hospital stay, complications and outcome. We also determined cold ischemic time (CIT), which is the length of time between aortic cross-clamp in the cadaveric donor and the time of revascularization of the liver in the recipient. Outcome was determined by patient and allograft survival, number of rejection episodes, recurrence of disease, need for retransplantation, and return to work.

We reviewed data on patients referred to our transplant center for liver transplant evaluation during this same time period. Reasons for not transplanting these patients at our center were noted.

We also reviewed demographic data on cadaveric donors for these transplant recipients. Aggregate data on donors during this 5-year period were also obtained from the Organ Donor Center of Hawaii, the official Organ Procurement Organization (OPO) for the state of Hawaii.

Results

Twenty-one liver transplants were performed at St. Francis Medical Center in the first five years since inception of the program in May 1993. There were 11 males and 10 females with a mean age of 52.0 years (range 39-62 years). In terms of race distribution, there were 7 Caucasians, 6 Japanese, 5 Filipinos, and one each for Chinese, Korean, and Hispanic-American extraction. Etiology of end-stage liver disease was predominantly Hepatitis C (13 of 21 patients). Other etiologies included alcoholic cirrhosis (3 patients), Hepatitis B (2 patients), autoimmune hepatitis (2 patients) and

cryptogenic (1 patient). Two patients also had hepatocellular cancer at the time of transplant, in addition to their underlying disease. (Hepatitis B in one and Hepatitis C in the other).

Seventeen patients were waiting at home when called in for liver transplant. Four patients were in the hospital – 2 in the intensive care unit, and 2 on the general medical floor when a donor organ became available.

Mean operative time was 9.1 ± 2.3 hours (range 6-15.5 hours). Patients received a mean of 13.3 ± 18.0 units of packed red blood cells (PRBCs). The amount of blood transfused in the last 16 transplants was 6.2 ± 3.3 units. This may be multifactorial and may include the use of antifibrinolytic agents such as aprotinin given intravenously during these most recent 16 procedures. Mean ICU stay was 7.4 ± 11.4 days (range 1-49 days) with 11 patients remaining in the ICU for 3 days or less. Mean hospital stay was 18.0 ± 16.7 days (range 6-71 days) with 10 patients hospitalized for less than 10 days. (Hospital/ICU length of stay based on 20 patients, as one patient currently hospitalized)

Early complications which required return to the operating room within the first 30 days, included bleeding (2 patients) and bile leak requiring biliary reconstruction (2 patients). One patient also required return to the operating room after she accidentally removed her T-tube on post-operative day 4, and another patient required drainage of a mucocele of the cystic duct stump.

Infectious complications in the initial hospitalization included Vancomycin-resistant enterococcal peritonitis in one patient and fungal line sepsis in a second patient. Two patients developed opportunistic infections during the post-transplant period. One of these patients developed a Herpes simplex viral infection manifested by skin lesions, fever, and mouth/pharynx ulcerations. This resolved with use of acyclovir and lowering of immunosuppression. A second patient developed respiratory symptoms and a lung mass with needle biopsy yielding *Candida albicans*. This mass resolved with a course of fluconazole.

Two patients suffered cerebrovascular accidents 1.5 and 28 months post-transplant. One of these patients also sustained a femoral neck fracture shortly after the cerebrovascular accident. Both patients have recovered well with no noticeable residual deficits.

Thirteen patients underwent transplant for Hepatitis C. Of these, seven have had liver biopsies for elevated liver enzymes. Five of these demonstrated histologic evidence of recurrence. Immunosuppression has been lowered in these patients. One patient has been placed on interferon for histologic progression of hepatitis C, with evidence of early fibrosis. There has been no graft loss due to recurrent hepatitis C. Two patients with hepatitis B, have been followed closely for recurrence of disease. Hepatitis B immune

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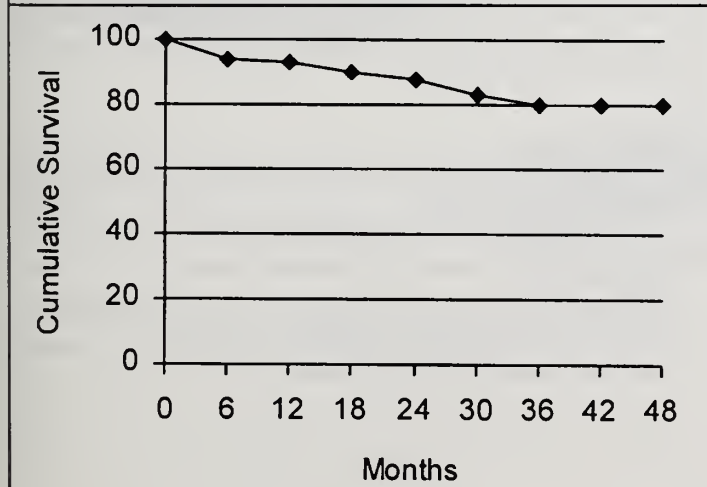
globulin has been administered prophylactically every 3-4 weeks to maintain a Hepatitis B surface antibody titer of greater than 300 mIU/ml. Patients have also been placed on lamivudine, a nucleoside analog which decreases the replication of the hepatitis B virus. Neither patient has demonstrated any evidence of recurrence of disease.

During this same time period, a total of 53 other patients were referred to our center for possible liver transplant evaluation. Six patients were evaluated and placed on the waiting list, but expired from complications of liver failure before a donor liver became available. Two patients were removed from the waiting list—one because the patient no longer desired transplant and the other due to alcohol recidivism after 2 years of abstinence. Ten patients were evaluated but decided to pursue transplant at mainland centers for various reasons. Twenty-three patients were not completely evaluated for either medical reasons (other severe underlying diseases, HIV positivity, or sepsis), psychosocial reasons (recent substance abuse, severe psychiatric problems) or financial reasons (insurance coverage contracted with mainland centers). Twelve patients did not pursue transplant evaluation any further despite physician referral and multiple attempts at contacting them.

Donor livers were obtained from the state of Hawaii only. No imported livers from the mainland were accepted during this time period. Mean donor age was 34.0 ± 15.2 years (range 12 to 55 years.) During this time period 41 livers were sent to mainland centers, because of inappropriate size or blood type for the potential recipients on our list. Several of these livers were of marginal quality (age >55 years, elevated liver tests, and/or high doses of vasopressors in the donor) and were not felt to be suitable at that time. Mean cold ischemia time was 388 ± 110 minutes (range 168-619 minutes).

Six patients experienced transplant rejection. Five of these patients improved with a high-dose intravenous steroid bolus (500-1000mg). The sixth patient required a course of OKT3 (monoclonal antibody). Of the 15 patients who are at least 1-year post transplant, 14 are alive and functioning well, for a one year survival of 93.3% (See figure 1). One patient died at 3 months from complications of portal vein thrombosis and sepsis. No patient has required retransplantation. Of these 15 patients, 9 (60%) are currently working at part-time or full-time jobs.

Figure 1: Kaplan-Meier Survival Curve for liver transplant patients 1993-1998.



Discussion

Five years ago our group published an article in this journal on Hawaii's first liver transplant. Since that time, the transplant program in Hawaii has continued to thrive and has demonstrated that liver transplants can be performed here with results comparable to other US transplant centers. Our 1 year patient/graft survival was 93.3% and nationwide, the 1 year patient and graft survival was 87.0% and 79.1%, respectively. One year survival by UNOS (United Network for Organ Sharing) status was 92.3%, 100%, and 50% for status 3, 2, and 1 respectively. This is compared to 84.0%, 77.1% and 67.1% for the national data.¹ (Status 1 patients are waiting in the ICU, see below)

Liver transplantation has become a standardized treatment for end-stage liver disease. Surgeons have refined the operative procedure, and many new immunosuppressive drugs have helped minimize rejection. Other new advances include successful use of Hepatitis B immune globulin and nucleoside analogs, such as lamivudine to prevent recurrence of Hepatitis B.² We have also begun to understand the appropriate use of liver transplant for malignancies. When done in patients with smaller size (<5 cm), and without lymphatic spread, vascular invasion, or multiple nodules, the prognosis is better. Adjuvant modalities such as chemoembolization, and percutaneous ethanol may be used to treat the tumor while waiting for the appropriate donor.³ These modalities may also prevent recurrence of cancer, but it is difficult to know — they may only be delaying the recurrence. Longer follow-up studies will be necessary.

We still need to find the appropriate treatment for recurrent Hepatitis C. Whether interferon and use of new antiviral agents will help has not been completely determined.² Ultimately finding ways to treat Hepatitis C before progression to end-stage cirrhosis, will be the most beneficial.

The major problem facing all liver transplant programs, however, has been that of a limited supply of donor organs for the rapidly growing waiting list. Because of this, the transplant community continuously tries to improve the process of donor allocation and distribution in order to maximize use of this precious resource.

The indications for liver transplant continue to include irreversible advanced chronic liver disease, fulminant liver failure, metabolic liver diseases and certain neoplastic diseases. We continue to look for complications such as intractable ascites, variceal bleeding, encephalopathy, malnutrition, hepatorenal syndrome and recurrent spontaneous bacterial peritonitis as indications that a liver transplant will be needed soon. However, we are now unable to place a patient on the waiting list until specific criteria are met

Listing criteria is based on the Childs-Turcotte-Pugh score (CTP score, see table 1). Each patient is assigned a score based on albumin, bilirubin, prothrombin time, encephalopathy, and ascites. The score is used to give each patient a status.

Status 1: Fulminant liver failure

Status 2A: CTP score ≥ 10 in ICU and have at least 1 of the following:
acute variceal bleed, hepatorenal syndrome, refractory ascites, stage III/IV encephalopathy

Patient cannot be listed as Status 2A if extrahepatic sepsis, high dose or 2 or more pressures, or irreversible multi-organ failure

Status 2B: CTP score ≥ 10 or CTP score ≥ 7 and 1 of the following: acute variceal bleed, hepatorenal syndrome, spontaneous bacterial peritonitis, refractory ascites

Status 3: Patient requires continuous medical care, with CTP score ≥ 7

Table 1: Summary of Data	
Number of Patients	21
Mean age	52.0 years
M:F	11:10
Etiology	
Hepatitis C	13 patients
Alcohol	3 patients
Hepatitis B	2 patients
Autoimmune	2 patients
Cryptogenic	2 patients
Mean operative time	9.1 \pm 2.3 hours
Mean, blood transfusions	13.3 \pm 18.0 units
Mean ICU stay	7.4 \pm 11.4 days
Mean hospital stay	18.0 \pm 16.7 days
#with rejection	6 patients
#currently employed	9 patients
1 year graft/patient survival	93.3%

Table 2: Childs-Turcotte-Pugh Score			
Points	1	2	3
Encephalopathy	None	Grade 1-2	Grade 3-4
Ascites	Absent	Slight (controlled with diuretics)	Moderate
Bilirubin (mg/dl)	<2	2-3	>3
Albumin (g/dl)	>3.5	2.8-3.5	<2.8
Prothrombin time (sec prolonged)	<4	4-6	>6
For primary biliary cirrhosis, other cholestatic liver diseases. Bilirubin (mg/dl)	<4	4-10	>10

United Network for Organ Sharing (UNOS) is an organization, which exchanges scientific information, compiles statistical data, promotes organ donation and creates policy for all organ allocation/distribution. Members of UNOS include transplant centers, organ procurement organizations, transplant physicians, histocompatibility laboratories, and members of the community including transplant recipients and donor families.

UNOS has developed various policies for organ allocation depending on the type of organ transplanted. UNOS has divided the US into 11 different regions – Hawaii is a part of Region 5. Factors

which are generally involved in organ allocation include blood type, size of the patient, waiting time, and medical urgency status.

When a donor liver becomes available, it is offered to the patient of compatible blood type and size and in the order of medical urgency (Status 1 first) locally, then within the region, then within the United States (US). If a liver becomes available in Hawaii, it is offered to local patients first. If no suitable patient is found then it will be offered to the centers within Region 5. If no one in region 5 accepts the organ, it may be used anywhere in the US.

UNOS has developed the standardized listing criteria outlined above in order to avoid listing patients too early or transplanting patients with unreasonable likelihood for survival. It allows for some uniformity in listing practices between the 121 liver transplant centers in the US.

The most controversial issue currently facing the transplant community is the intervention of the Department of Health and Human Services (HHS) on the practices of UNOS. Several of their principles include; "Transplant patients are best served by an organ allocation system that functions equitably on a nationwide basis" and "Organs should be equitably allocated to all patients, giving priority to those patients in most urgent medical need of transplantation, in accordance with sound medical judgment". Also, "The Secretary of HHS should represent the public interest by setting broad goals for the OPTN (Organ Procurement and Transplantation Network) and by overseeing OPTN policy development and operations with a view toward ensuring that the goals are being addressed in a reasonable manner".⁵ While transplanting the sickest patients seems to make sense to the average person, studies have demonstrated that the sickest patients have the poorest survival and the highest hospital charges.^{1,4,5} Furthermore, if there is a single national list of patients, donor organs may end up traveling longer distances to the sickest patients—thus prolonging the cold ischemic time and threatening graft function.

How any new rules will affect Hawaii is not clear at this time. Our program has had difficulty transplanting the sickest patients—with six patients dying while waiting on the list. Furthermore, only 9.5% of all patients transplanted were waiting in the ICU(status 1 or 2A) compared to the national average of 16%.¹ This may be due in part, to geographic isolation and difficulty sharing organs with mainland centers. The basic problem underlying the entire controversy or organ distribution, however, is the lack of enough donor organs to meet the ever-burgeoning list of patients waiting for transplant. Physicians and all health care professionals, should do their part for the organ shortage by promoting organ donation and promptly referring any potential donor.

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Use of Complementary and Alternative Medicine in Hawaii Cancer Patients

Carolyn C. Gotay PhD, Wendy Hara BA, Brian F. Issell MD, Gertraud Maskarinec MD, PhD

Abstract

This research investigated complementary and alternative medicine (CAM) use by Hawai'i cancer patients. Thirty-six percent of patients used CAM, most commonly religious/spiritual therapy and herbal treatments. CAM use was linked with younger age, female gender, Catholic religion, and more education. More research is needed to inform decision-making.

Introduction

Complementary and alternative medicine (CAM) has received increased attention in the past few years, both in the lay and professional literature. Although alternative medical practices and systems have a long history in the US,¹ the establishment of an Office of Alternative Medicine (OAM) within the National Institutes of Health in 1992 gave impetus to defining the field and setting a research agenda. The most recent definition of CAM, developed by a panel of experts convened by the OAM includes the following points: "Complementary and alternative medicine (CAM) is a broad domain of healing resources that encompasses all health systems, modalities, and practices and their accompanying theories and beliefs... CAM includes all such practices and ideas self-defined by their users as preventing or treating illness or promoting health and well-being..."² Specific types of CAM have been classified by the OAM to include alternative systems of medical practice (e.g., acupuncture), bioelectromagnetic applications (e.g., electromagnetic fields), diet, nutrition, and lifestyle changes, herbal medicine, manual healing (e.g., massage therapy), mind/body control (e.g., meditation), and pharmacological and biological treatments (e.g., anti-oxidating agents).

Given that cancer is a potentially fatal disease which is often not curable with currently-available allopathic medical treatments, it is not surprising that cancer patients are likely to seek out CAM therapies. Published reports of the prevalence of CAM use in cancer patients vary; a recent review of 26 surveys found reported use rates varied from 7% to 64%, with a mean across studies of 30%.³ Such variations are likely to reflect differences in definitions of CAM used by various investigators, as well as differences in characteristics of the respondents.

CAM use in cancer patients poses a number of serious concerns. For example, some CAM therapies have significant toxic side effects.⁴ Further, no quality control standards are in place for herbal supplements, creating inconsistency in dosages and the potential for contamination.³ CAM can be costly as well: in excess of \$14 billion overall is estimated to be spent annually in the US on CAM treatments.⁵ Patients may delay or refuse potentially curative cancer treatments in favor of CAM. On the other hand, some of types of CAM may be benign, or have some therapeutic effect. CAM may also contribute to better quality of life. Understanding these potential effects is essential before physicians can make recommendations about CAM use.

Hawai'i presents an exceptional environment to investigate the use of CAM therapies in cancer patients. Given the cultural diversity of the state, many different kinds of CAM therapies are readily available, including traditional Hawaiian healing and Chinese medicine, such as herbs and acupuncture. While intense ethnobotanical research is ongoing to identify biologically active components in native plants used in traditional medicine,^{6,7} no information is available about how many patients use these and other approaches and why they do so.

This report provides a summary of the results of two studies in newly diagnosed Hawai'i cancer patients: a survey of CAM use developed to determine the types of CAM therapies used, document the prevalence of use, and describe characteristics that distinguish CAM users; and an interview study designed to gain in-depth information about why breast cancer patients used CAM and how they evaluated their experience.

Study 1

Methods

Participants. Patients were identified through consecutive registrations on the Hawai'i Tumor Registry (HTR), a member of the National Cancer Institute-supported Surveillance, Epidemiology, and End Results Registry. Eligibility criteria were: histologic confirmation of any kind of cancer diagnosed between four and six months previously; ability to understand English; permission of primary physician; Oahu residency; Caucasian, Filipino, Hawaiian, or Japanese ethnic origin; 18 years of age or older. Participation was not limited by stage or site of disease.

Procedures. Permission was obtained from the attending physician before patients were contacted. Patients received a letter followed by a telephone call, and data were collected by interviews, most often at the patient's home. Interviews were conducted by one of four female research associates, all of whom had completed graduate work in social sciences as well as extensive training in

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interviewing cancer patients. The patients completed a semi-structured interview which included the questions discussed in this paper. (Additional questionnaires were also administered which will be discussed in separate reports.)

Type of CAM use. Patients were asked, "Have you tried any alternative, traditional treatments or remedies? What were they?" The interviewers recorded verbatim responses in the patients' own words. The responses were then compiled and coded using the previously-mentioned classification scheme for CAM therapies developed by the OAM. The OAM's criteria provided a framework for classifying the responses of the patients in this study.

Results

Participation. A total of 367 cancer patients participated in the study, representing 58% of the total of 646 eligible patients who were invited to take part. The most frequent reasons for nonparticipation were patients not feeling well enough to take part or being "not interested." A comparison of participants and non-participants showed that there was some variation in response rate by ethnicity: 65% of Caucasians and Hawaiians, 56% of Filipinos, and 51% of Japanese patients agreed to take part. There was a gender difference in participation as well: 49% of men and 68% of women participated in the QOL interview. The participants were slightly younger than the patients who refused to take part (means of 62 vs. 68 years). Breast cancer patients were particularly likely to participate: 82% of the breast cancer patients agreed to take part in the study.

Three hundred forty three patients who provided complete information about CAM use comprised the sample for this paper. Cancer sites for these patients included breast (34%), prostate (29%), bladder (6%), and uterus (8%), as well as smaller numbers of a variety of other cancers. All patients had undergone some kind of cancer therapy; 81% had surgery, 39% radiation therapy, 24% hormonal therapy, and 18% chemotherapy.

Types of CAM used. Table 1 provides a summary of the different kinds of CAM approaches, the number of patients in this study reporting use of each type, and examples of the kinds of remedies mentioned by patients. One hundred twenty two patients reported using a total of 195 different types of therapies, an average of 1.6 per patient. The most frequent type of CAM was religious or spiritual therapy; followed by herbal medicine and lifestyle changes. Within each category, patients reported many different types of treatments.

Prevalence and correlates of CAM use. Table 2 summarizes characteristics of study participants who did and did not report use of CAM therapies. It can be seen that, overall, 36% of the participants said that they had tried CAM. A number of patient characteristics were related to therapy use: age, gender, religion, and education. We did not observe significant differences according to ethnicity, marital status, cancer site or stage of disease.

In order to determine which of these variables was the best predictor of CAM use, a stepwise logistic regression was performed using the sociodemographic and clinical variables in Table 2. Two variables were significantly associated with CAM use in this analysis: having a college degree (odds ratio = 2.4, 95% confidence

Table 1.—Types of Complementary and Alternative Medical Therapies Used By the Patients.

Type of CAM	Number of Patients	Examples of Specific Treatments
Alternative Medicine	5	Acupuncture; Chinese, Hawaiian, or Japanese Medicine; Detoxifying Bodily Systems; Naturopathy
Lifestyle Changes	46	Dietary or Exercise Changes; General Improvements; Macrobiotic or Special Herbal Guidelines; OTC Vitamins and Minerals
Herbal Medicine	40	Aloe Juice; Herbal or Mushroom Teas; Herbal Supplements; Herbs and Vitamins Together; Marijuana; Seaweed; Wheat Grass
Mind / Body Control	24	Guided Imagery; Meditation; Mental / Spiritual Self-improvement; Positive Thinking; Reading Self-help Books; Relaxation; Support Groups; Visiting a Psychic; Visualization
Manual Healing	9	Massage; Shiatsu; Touch Therapy / Healing Touch
Pharmacological and Biological	10	Anti-oxidants; Enzymes; Flavonoids; Shark Cartilage
Prayer	61	Prayer By Others or By Oneself; Faith Healing or Healing Mass

Note: Some patients used more than one CAM. The total number of patients was 122.

intervals = 1.3, 4.3) and being Catholic (odds ratio = 1.9, 95% confidence intervals = 1.1, 3.3).

Study 2

Methods

Participants. Participants were asked to participate in an interview about their CAM experience on the basis of an affirmative response about CAM use on a mailed questionnaire that was part of an ongoing study of patterns of care in breast cancer. This study was open to all patients with newly-diagnosed breast cancer at several major Honolulu medical centers. Physician permission was obtained before patients were enrolled in the study. The study included

Table 2.—Variables Associated with CAM Use

Variable	Used CAM	Did Not Use CAM	Sig.
Age			
Under 50	26 (45.6 %)	31 (54.4 %)	
50 – 69	59 (35.8 %)	106 (64.2 %)	
70 or Older	35 (30.4 %)	80 (69.6 %)	p = 0.147
Mean (Std. Dev.)	60.2 (13.1)	63.5 (12.1)	p = 0.022
Ethnicity			
Hawaiian	16 (38.1 %)	26 (61.9 %)	
Caucasian	38 (33.9 %)	74 (66.1 %)	
Japanese	45 (34.9 %)	84 (65.1 %)	
Filipino	21 (38.9 %)	33 (61.1 %)	p = 0.911
Education			
Never Finished	15 (32.6 %)	31 (67.4 %)	
High School			
High School	20 (23.3 %)	66 (76.7 %)	
Graduate			
Some College	39 (36.4 %)	68 (63.6 %)	
College Graduate	43 (46.7 %)	49 (53.3 %)	p = 0.012
Gender			
Male	46 (30.3 %)	106 (69.7 %)	
Female	74 (40.0 %)	111 (60.0 %)	p = 0.063
Religion			
Catholic	40 (45.4 %)	48 (54.6 %)	
Other Christian	40 (30.1 %)	93 (69.9 %)	
Buddhist	14 (28.6 %)	35 (71.4 %)	
No Preference	16 (30.8 %)	36 (69.2 %)	p = 0.044
Marital Status			
Not Married	31 (31.6 %)	67 (68.4 %)	
Married	83 (36.7 %)	143 (63.3 %)	p = 0.378
Cancer Stage			
Stage 0, 1, or 2	98 (33.8 %)	192 (66.2 %)	
Stage 3 or 4	21 (45.7 %)	25 (54.3 %)	p = 0.118
Cancer Site			
Breast	49 (42.2 %)	67 (57.8 %)	
Prostate	28 (28.3 %)	71 (71.7 %)	
Other	43 (35.2 %)	79 (64.8 %)	p = 0.103

a number of questionnaires as well as review of medical records which will not be discussed here.

Methods. A female medical student interviewer conducted semi-structured interviews at a location of the patient's choice. Most patients were interviewed at home. The interview included both open-ended questions and self-administered questionnaires.

Results

Participation. Twenty-eight patients were asked to take part in an interview about CAM, and 24 agreed. The ethnic distribution was: Caucasian (n=9), Japanese (n=6), Filipino (n=4), Chinese (n=3),

Hawaiian (n=1), and Native American (n=1).

Allopathic treatment. All patients had received surgical treatment, 13 had received chemotherapy, and 15 had received radiation. Most women were very satisfied with their medical care; on a scale of 1 to 10, where 10 signified "completely satisfied," respondents gave a mean score of 9.4 (n=20; four women did not wish to use the scale to respond to this question).

Types of CAM used and perception of results. Findings indicated that the patients used a great variety of therapies. The most common CAMs were herbs (n=13), vitamins (n=11), and massage (n=5). A great variety of CAMs were used by smaller numbers of patients, including aloe, meditation, noni, qi gong, meditation, healing touch, shark cartilage, and acupuncture. Most patients used more than one CAM simultaneously.

Most women were very satisfied with their CAM experience; on a scale of 1 to 10, where 10 signified "completely satisfied," respondents gave a mean score of 8.7 (n=17). Many women could identify specific outcomes that were associated with their treatment. For example, one woman took herbs prescribed by a Chinese herbalist for lymphedema and remarked, "He gave me great relief. Wow, my hands are almost the same size – he brought the swelling down." Several women cited the positive effects of aloe on wounds, and general increases in energy levels attributable to herbs, vitamins, and teas. A number of women were not sure if CAM had helped or not; as one person said about meditation and breathing exercises, "Psychologically, it was excellent. Physically, I don't know." Another woman was cognizant of possible placebo effects: "I think it's attitude too. You have to believe in it."

Discussion of CAM use with physician. No doctor advocated CAMs other than dietary changes as part of cancer treatment, although one physician recommended an herbal mixture along with an antibiotic. The women were asked if they had discussed their CAM use with their physician. About half (n=14) had done so. Of those who had not mentioned this to their physician, the most common reason was "It didn't come up." No woman who had discussed her CAM use reported a negative reaction. Most physicians seemed to take a neutral stance ("he didn't discourage or encourage me"), although a number were supportive, making remarks such as "Go for it!," "If you feel you want to take it, then go ahead." Several physicians asked to see the treatment (e.g., the bottle of pills or, in one case, a plant).

Case examples of patient experiences. To illustrate the variety of CAMs used by some women, and their experiences with them, several case studies of heavy CAM users are described below.

Case A. A 50 year old Japanese women who was diagnosed with a second primary breast cancer used a number of CAM approaches. She had received an advanced degree and worked full-time in a professional position. Mrs. A. obtained several herbs through a mail order company including pau'd arco (bark of the tahibo plant) and "neolife" vitamins (which included vitamins C, E, a selenium supplement, and others). She also ingested wheatgrass tea (to "clean my system"), lymph tea ("it's anti-cancer"), and "antioxidants." In

addition, she consulted with an iridologist, a Christian prayer healer and someone who conducted colon cleansing. Further, she engaged in meditation. An auntie had been the person who suggested most of these remedies to her, and she had used them for the decade following her first diagnosis. She felt that using CAM gave her peace of mind and would save her from dying. In her view, in fact, CAMs should serve as primary cancer treatments since they are more likely to lead to healing than medical care. Mrs. A. added, "Take time out for fun. One of the major medications is to be happy."

Case B. Ms. B. was a single 50 year-old Caucasian woman who was a high school graduate. She had received surgery and radiation for her Stage I breast cancer. Ms. B. took Chinese herbs as well as Vitamins A, B, and C, evening primrose oil, garlic, calcium, antioxidants, and oolong tea. In addition, she practiced qi gong, participated in a reiki group, and underwent light therapy. She also took nutrition classes at a local medical center to improve her eating habits. She worked full-time in a service industry, and one of her clients had alerted her to these options. She said she chose CAMs "because I believe in alternatives. I don't believe that doctors aid you in healing. I didn't have any expectations. I went in with an open mind. It couldn't hurt and it felt right." Ms. B. felt that the CAM, qi gong in particular, "works because it's positive and natural. We have the capability of curing ourselves. Your mind can cure you or kill you."

Case C. Ms. C. was a single woman in her forties of Chinese-Korean ancestry who was diagnosed with Stage 2B breast cancer. She was a college graduate who worked full-time in a professional position. She had received surgery, chemotherapy, and radiation therapy for her disease and was currently taking Tamoxifen. With respect to CAMs, Ms. C. took sunrider (Chinese-oriented herbs), antioxidants, therapeutic tea, vitamins, garlic, Echinacea, aloe, and florabalan, as well as shiatsu massage. She believed that the herbs played a role in purging the body of toxins and also helped her to get through the chemotherapy: "I know it's done something, since being on the products helped me to respond to the drugs." She also noticed that the shiatsu helped her to regain motion in her shoulder after surgery. She saw CAM as complementing medical care: "It works hand in hand. They're two different things. The medical treatment blocks disease. (CAMs) are as effective as medical treatment in building up the body."

Discussion

This study provides the first report of CAM use in Hawai'i cancer patients. Study 1 is based on responses from a registry-based population and includes a heterogeneous group of patients who were assessed at the same time after diagnosis. Study 2 provides in-depth information on a specific population sub-group: women with breast cancer. Several caveats to data interpretation should be mentioned, however. Given the differential response rates, the results may be more valid for Caucasians, Hawaiians, women, breast cancer patients, and younger individuals. In addition, the survey and interviews relied on self-reports. Even though the interviewers were not part of the medical care team and had been trained to elicit candid responses to personal questions, it is possible that some patients may not have wanted to discuss full CAM use with the interviewer.

The patients reported using a tremendous variety of CAM approaches, and many used more than one approach simultaneously. For the most part, the kinds of therapies cited were consistent with the OAM classification. However, several significant differences are seen. The OAM listing includes "bioelectromagnetic applications," which includes blue light treatment and artificial lighting, electroacupuncture, electromagnetic fields, electrostimulation and neuromagnetic stimulation devices, and magnetoresonance spectroscopy. Only one patient in the interview study mentioned having tried one of these approaches. Perhaps they are not as popular in Hawai'i as elsewhere. On the other hand, the CAM listing includes "prayer therapy" within the general "mind/body control" category. In this sample, the use of prayer was so prevalent that we listed it as a separate category.

With respect to prayer, and in fact to all the therapies mentioned, sometimes patient responses indicated behaviors that did not greatly differ from everyday practices, while others represented a special cancer-related activity. For example, many patients reported saying prayers, or having prayers said by their church, to help themselves get well, while one patient said that the priest conducted a healing mass "to try to remove my sickness," and another had gone to a Christian prayer healer. Dietary changes included changes as simple as eating healthier foods and as complex as daily preparation and ingestion of a special soup using six fresh vegetables recommended by an alternative medicine institute. Many herbal medicines were mentioned, the most common being essiac tea and shark cartilage. While manual therapies were relatively uncommon, a number of patients reported experiences with "healing touch" in the hospital. One patient related how a staff member in the same day surgery unit included healing touch in preparations for her lumpectomy. "She 'laid over hands' and told me to 'see the light' and let it heal me. Wheeling me to surgery, (she) sang Happy Trails." The patient said she laughed, went along with it, and also felt more at peace.

Thirty-six percent of patients in this study reported using some kind of CAM. As mentioned earlier, previous estimates of how many cancer patients use CAM have varied considerably. These reports differ for a number of reasons: the year when the data were collected (since CAM's popularity has increased over the past decade), patient population (site of disease and type of institution), the length of time since cancer diagnosis, methodological differences in how patient response was elicited (e.g., an open-ended question, such as that in the current study, compared to a checklist), and the varying definitions of CAM that were employed. The findings of this study are quite consistent with the average percentage — 30% — reported in the world's literature. However, additional research is needed to replicate and refine this estimate.

These results of the survey indicated that CAM users tend to be younger, women, Catholic, and better educated. These correlations, with the exception of the link to Catholicism, are consistent with all other studies of CAM in cancer patients and other populations.³ Educational level has been investigated in virtually all studies of CAM use and consistently emerges as the strongest predictor. While this may seem surprising initially, it likely reflects greater knowledge and access to resources among people with higher education. Education may also confer increased self-confidence in knowing how to seek out additional support beyond what is provided in the hospital and doctor's office. Religion, and Catholicism in particular,

have not been identified with increased CAM use in other reports. However, as noted previously, the current population appeared to be much more likely to mention religious approaches for their cancer. It should be noted that a high percentage (73%) of Filipino patients were Catholics. While religion emerged as a more powerful predictor than ethnicity in our analysis, the small number of individuals in some groups limited statistical power to detect differences. It is likely that the many Filipino cancer patients seek support from their religion. We did not see other ethnic variation in CAM use, although our sample sizes were small. However, it is possible that the ethnocultural mix that occurs in many aspects of life in Hawai'i extends to this area as well, and that cancer patients in this state draw on the full range of options available from a variety of cultures. We did not find that CAM use varied according to stage of disease. However, it is possible that larger and more varied samples may report stage-associated differences in types and frequency of CAM use. For example, patients with completely resected cancer may be more likely to seek therapy to manage the symptoms associated with adjuvant chemotherapy or radiation as well as preventative interventions. Patients with advanced or incurable cancers may seek CAM modalities directed at treating their existing cancer. These issues may be addressed in future studies.

This study has shown many cancer patients in Hawai'i are using alternative treatments in conjunction with their medical treatments for cancer. Of 38 patients who were undergoing chemotherapy at the time they completed the survey, 11 (29%) reported taking herbal supplements of some sort at the same time. It is not known how many of these patients discussed their CAM practice with their physicians, although the interview study indicated that almost half of the women did not discuss their CAM use with their physicians. However, herbal remedies may have a number of side effects and may possibly interact with chemotherapeutic agents and other medications. Thus, physicians, and oncologists in particular, need to be aware of the common alternative practices available and used here in Hawai'i so that they may initiate discussion about these issues with their patients and guide them away from potentially harmful treatments.

The interviews with the breast cancer patients replicated a finding that has been reported elsewhere: satisfaction with medical care was rated highly, indicating that for many patients, using CAM is not a reflection of dissatisfaction with medical care. Although there were a few cases where the patient was "anti-biomedical therapy," most women in this study rated their medical care highly. Obtaining CAM appeared to meet different needs, including symptom control, psy-

chological support, including stress management, spiritual concerns, and the ability to exert control over their health. A number of women remarked, "I had nothing to lose."

Additional research is required to examine the efficacy of CAM interventions. Since so few of the approaches used by the patients in this study have received rigorous evaluation, their value is unknown. Patients remain at the mercy of unsupported claims and powerful advertising, and they may waste time, energy, and money and end up demoralized or with worse outcomes than if they had not used CAM. Yet it is possible that CAM offers benefits in terms of symptom control, enhanced quality of life or survival. The very process of seeking out CAM may enhance patients' morale, and improve their efforts at self-care. The investigators at the Cancer Research Center have several other studies planned and in progress that will lay a foundation to understanding more about why cancer patients seek CAM and its effects on patient outcomes. The team is also working to identify CAM approaches that will be acceptable to patients and physicians for testing in controlled trials. Such rigorous research will provide necessary information to enable cancer patients and their physicians to make informed choices about CAM.

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Correction

Please note that the above manuscript entitled, "Use of Complementary and Alternative Medicine in Hawaii Cancer Patients" by Carolyn C. Gotay PhD, Wendy Hara BA, Brian F. Issell MD, and Gertraud Maskarinec MD, PhD, was originally published (*Haw Med J*. 1999;58:49-51, 54-55) without entire list of authors. We reprinted the corrected manuscript in its entirety. We apologize to the authors and to the readers for the error.

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Maureen Purington
Avis Account Manager

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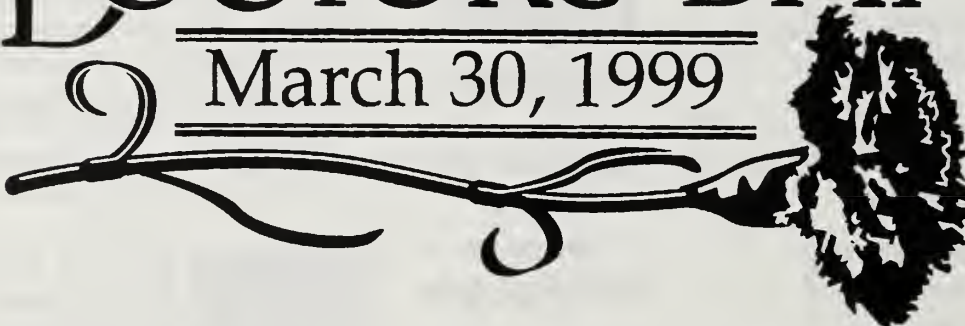
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DOCTORS' DAY

March 30, 1999

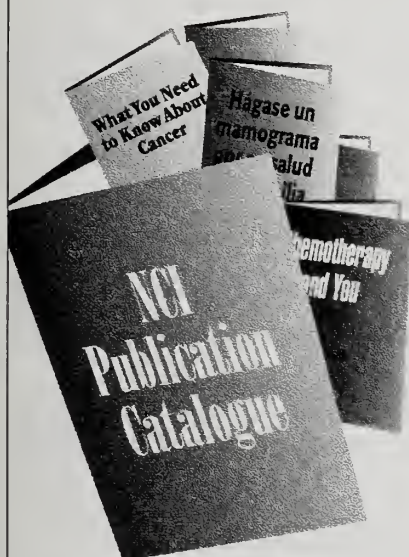


March 30 is celebrated as Doctor's Day across the nation. First proclaimed in 1933, Doctor's Day is dedicated to the physicians of America, recognizing their contributions of caring for the sick, advancing medical knowledge, and promoting public health.

On behalf of the City and County of Honolulu, Mayor Jeremy Harris presented the proclamation to HMA president Patricia L. Chinn, MD. In the photo are (l to r): Richard S. Miller, professor of law emeritus who received an award from the medical auxiliary for community service; Arleen Jouxson-Meyers, MD who was selected the 1998 HMA Physician of the Year; Mayor Harris; HMA President Chinn; and HMA Secretary Philip Hellreich, MD. State of Hawaii Governor Ben Cayetano also presented a Doctor's Day award (photo not ready at print time). Physicians will also be honored by the House of Representatives on March 30 and by the State Senate on April 1. The Kauka No Kōkua (Alliance) was also instrumental in coordinating a full page announcement in the Honolulu Advertiser honoring state physicians.

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To place a classified ad call 536-7702.

Artwork by
Chiri Endo,
La Pietra
student

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Let our 6th grade
girls show your 5th grade
girls what learning can be ...
Take a peek at the animated
learning environment with
make-n-take art, science and
technology projects. Super Sixth
Grade Sunday for prospective
applicants, January 24th,
3:30 to 5:30.

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(at the base of Diamond Head)



Ted's Almanac

(From Hakobu Kumagai's desk)

It is hard to believe that a man is telling the truth when you know that you would lie if you were in his place.

I used to be indecisive, but now I'm not sure.

I have an open mind, it's just closed for repair.

The world is full of willing people. Some willing to work and some willing to let them.

One golfer to another: "First it was my marriage, but now, the magic has gone from my nine iron, too."

Harvey's Law: "you can't fall off the floor."

Never underestimate the power of human stupidity.

Life in These Parts...

Insta Trak System (at SFH)

The first computer image guided sinus surgery in Hawaii was performed on Nov. 13 by ENT man Roland Tam. Roland says, "The benefit I found is that I knew my patient a lot better. Before, we used a CT scan which gave us a sampling of the sinus cavities...It was like reading every fifth page of a novel...This new technology allows us to see the whole picture, forward, backward, up, down, and sideways."

Ophthalmologist Jorge Camara performed surgery on a patient with proptosis. Jorge was equally ecstatic: "the endoscope allows the surgeon to view the details through a small hole...while the Insta Trak system is like entering a home...It allows the surgeon to see where he is going in relation to the other adjacent rooms of the house..."

Euthanasia Opposed

Thirteen organizations of physicians, nurses, the disabled, hospitals and the religious right banded as the "Hawaii's Partnership for Appropriate and Compassionate Care," to fight the proposal to legalize doctor-assisted death. The coalition included the Hawaii Medical Association, Hawaii Family Forum, Hawaii Right to Life, Hawaii Christian Coalition, the American Center for Law & Justice of Hawaii, Hospice Hawaii, Hawaii Catholic Conference, the Healthcare Association of Hawaii (representing hospitals and nursing homes) and the Hawaii Cancer Pain Initiative.

Physician Moves...

Thomas Jimenez, chief of surgery, Hilo Medical Center announced his recertification in general surgery by the American Board of Surgery.

OB Gyn man Ronald Volt closed his private practice in Hilo on Jan 15.

Hoon Park announced evening hours Mon-Fri 8am-8pm at 868 Ululani St, Hilo, HI.

The Hilo Family Practice Center closed as of Dec 31 (Family physicians Lynda Dolan, Laurie Hopman and Jan Martell relocated their practice at 409 Kilauea Ave.

Potpourri I...

Two men were sitting in a doctor's office. "What are you here for?" one asked.

"Circumcision," the other replied.

"I had one of those the day after I was born," the first man commented. "Afterward, I couldn't walk for a year."

Gravely ill, a man went to the doctor with his wife. After the exam, the physician motioned for the wife to meet him in the hallway...

"Your husband is very sick," the doctor said. "But there are three things you can do to ensure his survival. First, fix him three healthful, delicious meals a day. Next, give him a stress free environment and don't complain about anything. Finally, make passionate love to him every day."

On the way home, the husband asked, "What did the doctor say?"

"I'm sorry," she said, "but you're not going to make it."

Medical Tid Bits...

Efforts to Avoid C-Section Poses Dangers...

A NEJM article by four physicians at Harvard teaching hospitals say that pressure from HMO's and policy makers is leading physicians to encourage vaginal delivery even when the risks are higher than with C section. The OB men are concerned about an increase in uterine ruptures as well as injuries to babies caused by vacuum devices and forceps.

Re Birth Control Pill

The latest issue of the British Medical Journal reports that 46,000 British women tracked 25 years showed no increased incidence of death from cancer, strokes and other side effects.

More than 300 million women world wide have used the pill and an estimated 100 million are currently taking it.

Bruce Stadel, medical officer of the US Food & Drug Administration agrees that the latest study gives a "strong, resounding note that there is no long term impact even with the highest dose pills." (The new generation of low dose pills is even safer)

Magnet Therapy

Neurologist Michael Weintraub of New York Medical College reports in the Journal of Pain Management Jan issue that magnets may relieve chronic foot pain in diabetics and other ailments. Twenty million diabetics are subject to painful, burning, numbness and tingling of their feet and hands...

Paul Rosch, president of the American Institute of stress who has written about the history of magnet therapy says, "We don't know the mechanism by which it works...It is all trial and error."

Potpourri II...

A Challenge?

John Robinson MD Vancouver

When the pneumonia vaccine arrived last Fall, I went to visit one of my shut in, but very mentally alert 90 year old ladies...

As I was giving her the shot, I said, "This is

good for at least 10 years."

She promptly replied, "Oh, I'll be here for it. But will you?"

Conversation Stopper...

R. Bartlett MD Sussex, N.B.

An important part of the art of medicine is putting the nervous or embarrassed patient at ease. Such was the case one beautiful April day when a 20 year old woman was presenting for her first ever complete physical.

While examining her breast, I made the innocent comment, "Nice Spring."

Her quick and some what short retort was, "Yes, it's because I'm still young."

A few seconds later, she suddenly realized my comment was about the season, not her tissue turgor.

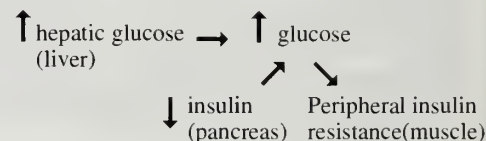
The rest of the examination was conducted with minimal conversation with no further effort to distract her from the indignities of her situation.

Conference Notes...

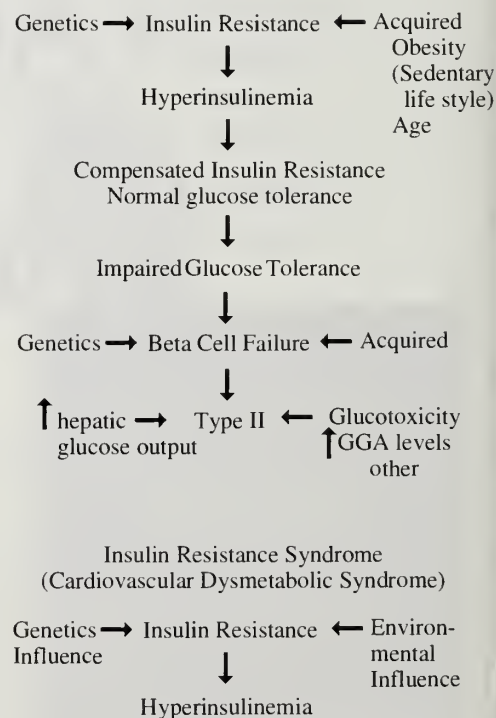
"Insulin Resistance" VP Robert Henry, UC San Diego, Friday, 8:00am, Queens Kam Aud Feb. 5, 1999.

A. Introduction:

a. Pathogenesis Type II:



b. Progression Type II



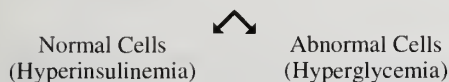
c. Insulin Resistance Syndrome

1. Clinical Manifestations:

- Central obesity
- Glucose intolerance
- HTN
- Atherosclerosis
- Polycystic Ovary Syndrome

Insulin resistance in IGT and DM: Glucose disposal rates at identical glucose levels:
Normal > IGT > DM

Insulin resistance: Pancreatic B Cells



2. Prevalence Insulin Resistance in Metabolic Disorders:

- ↑cholesterol
- ↑BP
- ↑urates
- IGT
- NIDDM
- ↑Triglycerides
- ↓HDL
- ↑IGT/NIDDM + Dyslipidemia + ↑urates: 95%

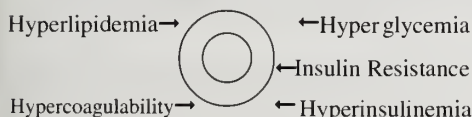
f. Long Term Complications of DM:

- ↑Microvascular disease
- ↑(Macrovascular) disease

g. CAD Mortality in Type II:

- men: 2-3 x ↑ death rate (Joslin)
- women: same after losing protection of estrogen (ie. post menopausal...)

Is insulin atherogenic? Ans: No
HBA1c predicts CAD in Type II:



h. Rx Cardiovascular Metabolic Syndrome:

- Ameliorate hyperglycemia
- Improve lipoprotein
- Control hypertension

B. Treatment of NIDDM: ("Getting back on the curve")

- Oral pharmacologic Therapy (5 classes)
 - Sulfonylurea (Most potent for HBA1c)
 - Biguanides
 - Alpha Glucoside Inhibitors: (Acarbose) tid a.c.; effect on HBA1c; start 25mg od and ↑up to tid; Max 50mg tid
 - Thiazolidinedione
 - Repaglinide: (in Metformin failure) Insulin secretagogue; adjunct to diet and exercise; use in combination with Metformin; enhances insulin secretion; two to four times a.c./d

*Metformin (US 4 yrs; Europe 40 yrs experience)
Lowers hepatic glucose production; insulin

sensitizer; in Sulfonylurea failures, add Metformin to glyburide or Metformin with insulin Rx; avoid when serum creatinine elevated (Metformin is cleared by kidney)

*Thiazolidinedione: pure insulin sensitizers

- Ciglitazone
- Praglitazone
- Priglitazone
- Troglitazone (4yrs)

*Troglitazone (Activities PPARy nuclear receptor in skeletal muscle)

Time course of weeks and months; never stop sulfonylureas when starting

Troglitazone (or any sensitizer); Troglitazone may reduce insulin dose in insulin treated Type 2; Troglitazone reduces triglycerides; raises HDL and LDL.

Treatment schedule for Troglitazone: Start 200mg od for 2 to 4 weeks; then increase q 2 to 4 weeks to maximum 600mg; check transaminase

**Insulin sensitizers are Troglitazone and Metformin...

	TRZ	MET	TRZ+MET
FBS	-2	-20	-35
HBA1c	↔	↔	-1.2
MEAN PPG	-25	-25	-41
EGD	↔	-18	-16
ISGD	+97	+27	+151

Potpourri III...

George knew what he wanted in a woman... "The girl I marry will be an economist in the kitchen, an aristocrat in the living room and a harlot in bed."

Now he's married and his wife has all the required traits—but not in the same order. She's an aristocrat in the kitchen, a harlot in the living room and an economist in bed.

Quotable Quotes

Most people don't mind criticism as long as it's about someone else... (*National Enquirer*)

We all live every day in virtual environments defined by our ideas. (*Michael Crichton*)

The world is progressing and resources are becoming more abundant. I'd rather go into a grocery store today than to a King's banquet a hundred years ago... (*Bill Gates*)

Doing the best at this moment puts you in the best place for the next moment... (*Oprah Winfrey*)

In the Fast Lane

I was heading for work on the freeway one morning when I noticed a car weaving slightly in the next lane. As I pulled even with it, I could see that the driver's face was almost touching the wind shield as she used the rear view mirror to apply mascara.

Suddenly she veered in my direction... It scared me so badly I dropped my lip stick right into my cup of coffee. (*Catherine Lemm*)

Conference Notes...

"GERD" VP Donald Castell MD, President American GE Ass'n, Chm Department of Medicine, Allgheny Univ of Health Sciences Fri Mar 5 QMC

Introduction:

a. GERD: Sy's c̄ or s̄ tissue damage 2° to reflux

of gastric contents...

b. NERD: Non erosive reflux disease.

Prevalence of Heart Burn in US:

Controls	Monthly	15%	Patients	20%
"	Weekly	14%	"	12%
"	Daily	7%	"	13%

GERD Spectrum:

Typical

(Heart Burn/ Regurgitation)

c̄ erosive esophagitis

s̄ esophagitis*

Atypical

Angina like pain

Asthma/cough

Laryngitis

Complications

Ulceration

Stricture

Metaplasia**

(Barrett's)

*Requires abnormal pH-metry

**AdenoCa increasing c̄ Barrett's.

Lower LES Pressure a/c severe GERD.

Pathogenesis GERD:

- LES incompetent
- **Inappropriate LES relaxation

GERD Diagnosis:

- Clinical Hx
- Barium studies (Air contrast)
- Endoscopy
- Ambulatory pH monitor

**Who to endoscope?

- GERD sy's > 5yrs
- age > 40
- White male (never seen in blacks)

24° Ambulatory pH Monitor: Spikes below pH 4.0 = reflux

GERD Rx:

- Life Style Modification
 - Elevate head while sleeping c̄ 6 inch block under legs or wedge under mattress.
 - Modify diet: ↓volume & fat
 - Avoid recumbancy 3 hrs pp
 - Stop smoking
 - Antacids, alginic acid, H₂RA (OTC dose)

b. Pharmaceutical Rx

- Promotility Agents:
 - Bethanachol (Urocholine)
 - Cisapride
 - Metoclopramide (Reglan)
 - Domperidone
 - Erythromycin ?

2). Acid Suppression:

- H₂ Blockers
- Acid Pump Inhibitors

**Proton Pump Inhibitors are the best agents for controlling esophageal exposure in GERD...

**GERD healing dependant on level of acid control.

c. Surgery: 1). Hill repair 2). Belsay repair

3). Nissen repair
***Laposcopic fundal plication

***Esophagitis Relapses Quickly After Cessation of Therapy:

*85% relapse within 6 mos after cessation of therapy...Therefore maintenance therapy important...

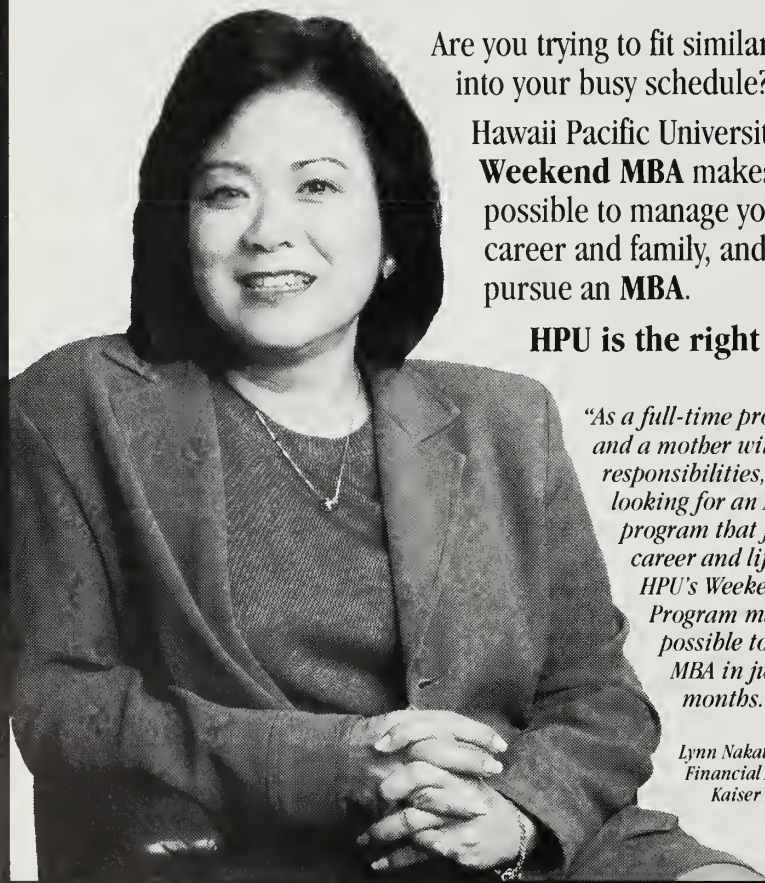
***Fundal plication: effective maintenance for 2 years.

Omeprazole Trial: Effective GERD maintenance 5 yrs... Same results with 11 years of Rx. May need to increase Omeprazole dosage: 20mg→40mg→80mg daily

Management of GERD: Endoscopy as guide to therapy.
Identify Barrett's esophagitis:

***Surgery is not a good diagnostic test for GERD.

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months."*

*Lynn Nakata,
Financial Analyst,
Kaiser Permanente*

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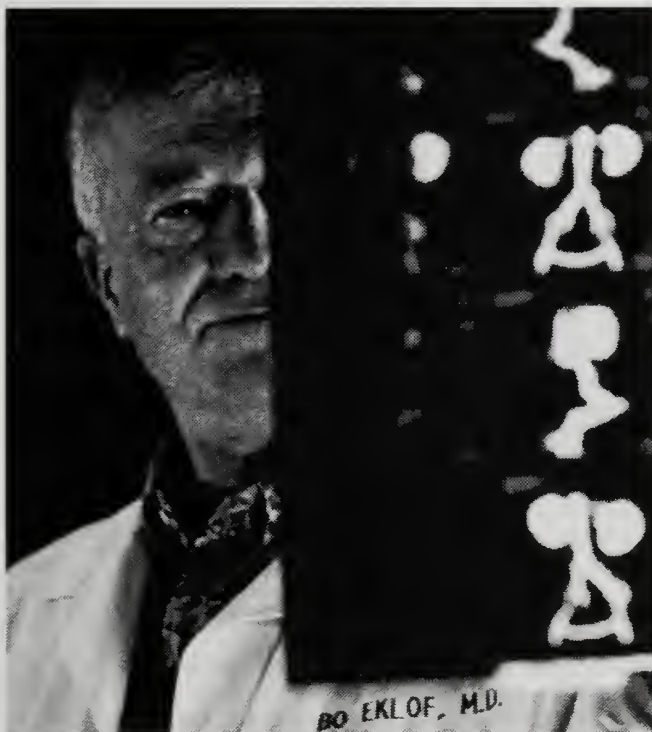
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You are invited to attend...

– Patient Care Conference –

Phytoestrogens

Harold A. Beck, MD

March 2, 1999 4:30 – 5:30 p.m.
Doctors Dining Room

LEARNING OBJECTIVES

At the conclusion, participants should be able to:

- Describe the biochemistry and identify the dietary sources of phytoestrogens.
- Review the published epidemiologic, clinical and basic science (mechanistic).
- Literature on phytoestrogens and:
 - cancer
 - cardiovascular disease
 - menopause/osteoporosis
- Design guidelines for patients interested in the clinical use of phytoestrogens.

– Friday Noon Conference –

Management of Pleural Effusion

Roy S. Adaniya, MD

March 5, 1999 12:30 – 1:30 p.m.
Doctors Dining Room

LEARNING OBJECTIVES

At the conclusion, participants should be able to:

- Gain knowledge in the different etiologies of pleural disease.
- Management of pleural effusions.
- Understand how pleural effusion can effect lung function.

– Tumor Board Conference Luncheon–

Head and Neck Cancer: Basics of Diagnosis and Treatment

Anthony J. Cmelak, MD & Barbara A. Murphy, MD

March 8, 1999 12:30 – 1:30 p.m.
Doctors Dining Room

LEARNING OBJECTIVES

At the conclusion, participants should be able to:

- Understand the basic epidemiology, histopathology, anatomy and staging of head and neck cancer.
- Recognize the conventional therapy for the treatment for localized carcinomas of head and neck.
- Summarize the standard and new drug and radiation therapy for patients with metastatic disease.

We would like to acknowledge the generous Educational Grant from Bristol-Myers Squibb Oncology

– Friday Noon Conference –

Environment of Care Issues That Impact Physicians' Daily Practice

*Kevin Matsukado, Rose Arpon, Michelle Fisher,
Mike Lau, & Clayton Takara*

April 16, 1999 12:30 – 1:30 p.m.
Doctors Dining Room

LEARNING OBJECTIVES

At the conclusion, participants should be able to:

- Understand and identify Infection Control, Tuberculosis, and Bloodborne Pathogens.
- Learn how to prevent Back Injuries.
- Understand Radiation Safety.
- Summarize Safety, Security, Hazardous Materials and Waste, Life Safety, Medical Equipment, Utility, and Emergency Preparedness.

Please call Fran Smith at 522-4471 for more information.



You Must Have Taken Great Pains, Sir: You Could Not Naturally Have Been So Stupid.

George Lundberg, MD, was editor-in-chief of the Journal of the American Medical Association (JAMA) for 17 years. Never shy of introducing politics into the JAMA, in the past the editor ran articles on physician assisted suicide, abortion, and even euthanasia. With the latest issue, Dr. Lundberg went over the edge. He chose the middle of the Congressional impeachment hearing of William Jefferson Clinton, 41st President of the United States, to publish an eight year old Kinsey Institute study on the definition of sex. The "research" was conducted at a mid-western state university, and consisted of questions centering around the definition of "did you have sex when....." The questions varied from tongue kissing, breast caressing, on through sexual intercourse, fellatio, cunnilingus, and anal penetration. Interestingly, the study showed that our President thinks much like a college student of 1991, where only about half believe that fellatio is "having sex." E. Ratcliffe Anderson, MD (call him Andy, not Ratty) executive vice-president of the AMA, read the article and promptly told Dr. Lundberg to clean out his desk. To publish this dated study at this time in our nation's history and political climate is pure politics, and no place for the AMA.

Experience Shows That HMOs Don't Learn From Their Own Experience.

Medical giant Aetna and the entire managed care industry were rocked to their foundations by the January 20, 1999, verdict of \$116 million in punitive damages brought by a jury in California. Teresa Goodrich, widow of a former deputy district attorney who died at age 44 from a rare form of stomach cancer, brought the complaint for failure to provide experimental treatment. The punitive loss followed a \$4.5 million damage verdict in the same case, and represents a resounding censure of bottom-line corporate medicine instead of providing patient care. Jurors were incensed over the three year delay Aetna took in acting on the case, and also the health plan handbook - "Nowhere in 20 pages was there a single mention of experimental treatment, yet all the denials were based on that." This event echoes the 1993 case in California where a jury ordered Health Net to pay \$89 million in damages for failure to cover experimental bone marrow transplant for a woman who had breast cancer. The lesson is obvious and simple. HMOs do not need legislative protection, they should merely allow their own doctors to practice quality medical care.

Honesty is the Best Policy, But There Are Too Few Honesty Holders.

Talk about your creative billing, and why medicine gets a black eye! Peter J. Embriano, MD shined a light in patient's eyes and told them he was doing laser surgery. He billed for 37 trabeculoplasties, 63 iridotomies/iridectomies, and 12 photocoagulations, when in fact, he did not even have the necessary instruments to perform the procedures in his offices. He billed for at least 751 endothelial cell counts that were neither necessary nor performed, and received payment of almost \$54,000. He has been banned from all Medicare, Medicaid and federal health plans for five years and has surrendered his medical license. If he is sent to jail, there is no opportunity for parole.

It's Not Necessary To Buy Politicians - It's Cheaper To Rent Them.

Dentists, teachers, airline pilots, CPAs, United Postal Workers, employees of Federal Express, machinists, and even carpenters all gave more in 1998 for political action than ophthalmologists. Wake up, gentlemen and ladies, because the oil of legislation is dollars. Dollars must be spent on politicians to curry their favor, to help them get elected, and to obtain access. At a miserly average of \$60/member for 1998, Academy members should be ashamed of their participation in the American Academy of Ophthalmology's political arm OPPTH-PAC. Eye surgeons reap more than half of their annual income from the federal government, so this apathetic behavior is difficult to comprehend. You and I may abhor the process and resent the expenditure, but to believe that we can stand above such tawdry means is to see the airplane taxi away from the gate, or to smell the exhaust from the bus, or more

precisely, to surrender your territory and your future to pretenders. For your own sake, support your local and your national PAC!

Creative Semantics Is The Key To Contemporary Government.

Almost surely you did not know that Medicare and Medicaid payments are made every year to "religious non-medical health care institutions." This weird reimbursement provision was built into the law in 1965 with the inception of Medicare in order to allow Christian Science facilities to be paid for custodial care of patients while they undergo spiritual treatment. The church argument that was accepted at that time was that its members would be forced to pay taxes for services their religious beliefs forbid them to use. This goofy mixture of church and state has been challenged by a group critical of faith healing, Children's Healthcare Is A Legal Duty (CHILD), and the case was won. It is now on appeal, and the AMA has provided a friend-of-the-court brief underscoring the difference between faith healing and medicine. The brief cites a study from the journal Pediatrics which looked at 172 cases of children between the years 1975 and 1995 who died without medical treatment because of religious beliefs. The study showed that 140 had at least a 90% chance of survival with appropriate medical care. Let us hope that the court recognizes the separation of church and state which Congress has failed to do for 34 years.

The Ku Klux Klan Has Not Produced Any Really Great Composers.

Another strange law suit is heading for adjudication in New York where 20 plus American hand gun makers are being sued. The seven plaintiffs claim that gun makers flood Southern states that have lenient gun laws and the excess flows north to states with stiffer laws like New York. They seek damages of \$2 million each. If the plaintiffs win it appears likely that similar suits will spring up as agencies around the country seek to tap into deep pockets of the manufacturers similar to the attack on the tobacco industry.

Usually When You Hear The Word Bipartisan, Something Ugly Is Coming.


An unique and logical plan is currently generating with a bipartisan commission on the future of Medicare. Under the proposed plan, the government would largely step aside and the benefit program would be patterned like the health benefits program available to federal workers. It would actually let Medicare patients decide their own medical destinies. With this plan the government would provide a fixed monetary benefit which Medicare recipients could use to purchase traditional Medicare coverage or pay a monthly premium of any one of a number of competing private-sector health plans. In summary, the plan would permit seniors to purchase the kind of medical care they want — co-payment in an indemnity plan, HMO, PPO, or whatever. It probably won't fly — Congress historically eschews allowing people to choose for themselves.

Heavens To PMS — Barbie Is Having A Mid-life Crisis.

Barbie doll products account for a third of Mattel's revenue, and Barbie sales fell off by 14% (only \$1.9 billion in 1998). What do you do when your 40 year old breadwinner (full name Barbara Millicent Roberts) who has had over 75 careers, ranging from rock star to astronaut, is losing her edge? Last year she had breast reduction and hip widening surgery, but that didn't prove enough. Now Mattel has embarked on a new line of hip "generation girls" including a Butterfly Art Barbie with a butterfly tattoo on her tummy and a nose ring.

Addenda

- ❖ The Hawaii Medical Association finished 1998 \$50,000 in the black. Thank you, Finance Committee and treasurer Chuck Kelley MD.
 - ❖ Environmentalists have renamed jungles into rain forests, and swamps into wetlands. After all, who is going to contribute to save jungles and swamps?
 - ❖ It is said that Domino's Pizza wagons have killed 20 people -- and that's not even counting the ones who ate the pizza.
- Aloha and keep the faith — rts ■



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Bishop Museum

Bishop Museum was built by Charles R. Bishop as a memorial to his wife, Princess Bernice Pauahi Bishop in 1890.



Editorial

Norman Goldstein MD
Editor, Hawaii Medical Journal

May is Melanoma Month

Governor Ben Cayetano has proclaimed May as "Melanoma Month in Hawaii" (page 113)

The American Academy of Dermatology has sponsored Skin Cancer Screening Clinics for more than 15 years. Dermatologists nationally have screened over one million people. Detecting over 91,000 suspected lesions, including approximately 12,000 suspect melanomas. Our Hawaii Dermatological Society, working with the Cancer Center of Hawaii and the Hawaii State Department of Health, has screened thousands of Hawaii's skins at Liberty House locations, churches, schools and Longs Drug Stores on all islands.

Last year, in Hawaii, we screened 762 people and found nine suspect melanomas as well as 49 basal and squamous cell carcinomas and 376 keratoses. The Hawaii Dermatologists will again be doing these volunteer services this month May 12, at Longs Drug Stores on all islands.

On Friday, May 14, The Straub Foundation and HMSA will sponsor a major program for professionals on the good and bad features of sun exposure in Hawaii. Screening for skin cancer will be held after the special Straub Foundation public symposium on

"Sun and Skin in Paradise". These exams will be conducted at the end of the public program to be held at the Ilikai Hotel on Saturday afternoon May 15th. Call 524-6755 for further information.

This Month—Food for Thought

The Waianae Diet

Theresa Danao-Camara MD, and Terry Shintani MD, present a preliminary study of the use of the Waianae Diet in the treatment of two patients with seropositive inflammatory arthropathies – presumably systemic lupus erythematosus. The Waianae Diet was first reported by Shintani and his associates in the American Journal of Clinical Nutrition in 1991¹ and after in the Hawaii Medical Journal in 1994.²

While this is a very limited study, the authors present an excellent review of diets and the effect of fasting on arthritis.

In the second manuscript, Terry Shintani continues his studies of the Waianae Diet, reporting on the long-term follow-up of the diet. Terry and his associates studied 173 obese subjects and were able to evaluate 82 of them at the end of the study, eight years after initiation of the project.

Their study does have some limitations, notably in the interpretation of the results but the *ad libitum* Waianae diet seems to be a practical method for some weight control in native Hawaiians. Food for thought.

1. Shintani TT, Hughes CK, Beckham S, et al. Obesity and cardiovascular risk intervention through the ad libitum feeding of traditional Hawaiian diet. *Am J Clin Nutr* 1991;53:1647S-51S.

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FIVE WAYS TO DIE ON THE GOLF COURSE:

1. Hit by a golf ball.
2. Run over by a golf cart.
3. Whacked by a golf club.
4. Struck by lightning.
5. Forgot your hat.

Surprisingly, one million new cases of skin cancer are detected every year. One person an hour in the U.S. dies from melanoma, the deadliest form of skin cancer. If you spend a lot of time in the sun, you should protect yourself. One out of five Americans develops skin cancer during their lifetime. Don't be one of them. Stay out of the midday sun. Cover up. Wear a hat. Seek shade. And use sunscreen. For more information on how to protect yourself from skin cancer, call 1-888-462-DERM or visit www.aad.org.



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Proclamation

WHEREAS, skin cancer represents the most common of all cancers in the United States, accounting for thirty to forty percent of all malignancies reported; and

WHEREAS, the Centers for Disease Control and Prevention reports that for the period from 1973 through 1997 the incidence of melanoma, a deadly form of skin cancer, increased faster than any other form of cancer in the United States; and

WHEREAS, while melanoma may be lethal if not properly treated at an early stage, melanoma and other forms of skin cancer are easily prevented through reducing exposure to sunlight; and

WHEREAS, in addition to those who are at high risk for genetic or biological reasons, and those who pursue high risk activities that are likely to cause overexposure, research shows that childhood overexposure to sunlight may increase a person's risk of skin cancer; and

WHEREAS, protecting skin from the sun during childhood and adolescence is very important in reducing the risk of skin cancer in later years; and

WHEREAS, about eighty percent of skin cancers could be prevented by protecting skin from the sun's rays; and

WHEREAS, the State Department of Health, Hawaii Skin Cancer Coalition, Hawaii Dermatological Society, American Cancer Society, Cancer Information Service of Hawaii, and Sun Protection-Hawaii, Inc.—working with other organizations in Hawaii—have planned activities for the month of May that will focus on the importance of early detection and prevention of skin cancer;


NOW, THEREFORE, I, BENJAMIN J. CAYETANO, Governor of the State of Hawaii, do hereby proclaim the month of May, 1999, to be

MELANOMA AND SKIN CANCER DETECTION AND PREVENTION MONTH

in Hawaii, and encourage all citizens to participate in planned activities this month that focus on the importance of early detection and prevention of skin cancer.

DONE at the State Capitol, in the Executive Chambers, Honolulu, State of Hawaii, this twelfth day of April, 1999.

Benjamin J. Cayetano



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Continuing Medical Education in Hawaii

**Juliana J. Woo, MPH
Educational Specialist**

Continuing medical education (CME) is a distinct and definable professional activity. It encompasses all of the learning experiences that physicians engage in with the conscious intent of continuously improving the performance of their professional duties and meeting their professional responsibilities. As an essential element in the continuum of medical education, CME shapes the professional development of physicians regardless of the nature and scope of their duties and responsibilities. CME is integral to practice throughout all stages of a career beginning with the completion of graduate medical education.¹

The Hawaii Consortium for Continuing Medical Education (HCCME), a joint venture between the Hawaii Medical Association (HMA) and the John A. Burns School of Medicine (JABSOM), University of Hawaii, is a CME provider and is accredited by the Accreditation Council for Continuing Medical Education (ACCME). As a state medical society, the HMA serves a dual role as a CME provider in joint venture with the JABSOM and as a CME accreditor. As a CME accreditor, the HMA has the authority to accredit local CME sponsors such as community hospitals and state specialty societies.

The ACCME is a cooperative effort of seven national medical organizations: American Board of Medical Specialties, American Hospital Association, American Medical Association, Association for Hospital Medical Education, Association of American Medical Colleges, Council of Medical Specialty Societies, and Federation of State Medical Boards. Today, the accreditation system involving the ACCME and state medical societies accredits more than 2,500 organizations that offer CME programs.

The major purposes of accreditation are to ensure quality and integrity of accredited providers by: establishing criteria for evaluation of educational programs and their activities, assessing whether accredited organizations meet and maintain standards, promoting organizational self-assessment and improvement, and recognizing excellence.²

In the U.S., accreditation of providers of continuing education for physicians is voluntary. Accreditation is not a governmental function, is not a rating system, and does not deal with credit. It is not a stamp of approval for individual courses or activities — although it is often mistakenly perceived as such. Accreditation is a process that consists of guided self-evaluation and self-improvement.³

To obtain accreditation, the HCCME submitted an application to the ACCME requesting accreditation. The application was a self-evaluation instrument of the process by which CME activities were planned and implemented, and included documentation of each step of the process. Representatives of the HCCME were interviewed in Chicago by a survey team. During this interview, the team gathered additional information regarding the HCCME's program of CME. A report of the interview was then forwarded to the Accreditation Review Committee (ARC) for review and action. In April of 1996, the ACCME approved reaccreditation of the HCCME for four years. The HCCME was found to be in substantial compliance of all essentials.

The HCCME sponsorship committee, comprised of representatives of the HMA and JABSOM clinical departments, was initially co-chaired by HMA members. Under the leadership of Drs. S. Kalani Brady and Paul DeMare, JABSOM faculty received on-the-job training on the CME process. For the past three years, HMA and JABSOM have shared the chairmanship.

In addition to sponsoring CME activities, the HCCME has jointly sponsored individual activities with groups that are not accredited. In the joint sponsorship relationship, the HCCME "lends" its accreditation status to an unaccredited body and the HCCME accepts the responsibility to ensure that the ACCME requirements are met. The HCCME has jointly sponsored activities with the Straub Foundation; HMSA Foundation; Pacific Association of Pediatric Surgeons, Rehabilitation Hospital of the Pacific; March of Dimes, Chapter of the Pacific; University of Hawaii College of Business Administration; and the American Cancer Society, Hawaii Pacific Division.

At the national level, the Association of American Medical Colleges (AAMC), Division of Medical Education (DME) has constituted the CME Advisory Group for the purpose of developing an action plan for the AAMC in CME. The action plan, currently under review by the CME section of the Group of Educational Affairs (GEA), addresses the role of CME in the continuum of medical education; appropriate settings for CME; barriers and bridges to the continuum; and models to facilitate CME in the continuum.

In coming months the HCCME will complete a self-evaluation survey and will apply for reaccreditation. In response to changes in the way physicians practice, rapid advances in biomedical knowledge and its application to the practice of medicine, and incorporation of evidence-based medicine, new ways of thinking about CME will be required. The HCCME recognizes the challenges they will face as they strive to provide meaningful learning opportunities for Hawaii's practicing physicians.

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3. Rosoff, AB and Felch, WC, editors. Continuing medical education a primer, 2nd edition. Praeger, NY, 1992.

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Waianae Diet Program: Long-Term Follow-up

Terry Shintani MD, MPH, Sheila Beckham MPH, RD, Jon Tang BS,
Helen Kanawaliwali O'Connor CHW, Claire Hughes DrPH, RD

Abstract

A long-term follow-up was conducted on 82 participants from prior programs based on *ad libitum* feeding of a traditional Hawaiian diet. Follow-up period ranged from 12 months to 90 months and averaged 33.67 months. An average weight loss of 15.1 pounds was maintained over 7.5 years of follow-up ($p < 0.0005$) even when stratified over two year intervals, suggesting that this type of program may be an effective long-term weight loss intervention.

Introduction

Obesity is a serious health problem in America; the national prevalence is approximately 31% in men and 34% in women¹ and it has been rising over the past 30 years.² It is associated with higher risks of a number of chronic diseases, such as cardiovascular disease, cancer, hypertension, and diet-induced diabetes. Obesity is of special concern among Native Hawaiians, as this ethnic population has one of the highest prevalences of obesity at approximately 64%.³ Furthermore, Native Hawaiians have among the highest age adjusted mortality rates in the Nation from disease associated with obesity, such as cardiovascular disease, diabetes, and stroke.⁴

Over the years, numerous approaches to the problem of obesity have been attempted using calorie restriction, exercise, meal substitution, surgical correction, medication, self-imposed fasting, and behavior modification. Unfortunately, while all of these approaches have demonstrated initial success, practically none of these interventions have shown any long-term efficacy in retained weight loss.⁵

Recently traditional diets, such as a traditional Mediterranean diet⁶ and traditional Asian diet,⁷ have been discussed as a viable approach to health risk factors and obesity intervention. The *ad libitum* use of a traditional Native Hawaiian diet coupled with a whole person approach, including lifestyle changes unique to the ancient culture and perspective has been previously evaluated in the Waianae Diet Program for its short term efficacy.⁸ However, the long term effectiveness of this approach has not been evaluated.

This article presents an analysis of a long term follow-up of individuals who have participated in an obesity and cardiovascular risk reduction program employing *ad libitum* feeding of a traditional Hawaiian diet known as the Waianae Diet Program.

Methods

The Original Intervention/Study

The original intervention evaluated was a 21 day dietary and lifestyle change program. A number of these programs were conducted over a 9 year period since the first intervention. Groups of approximately 20-25 men and women aged 24-64 years were fed an *ad libitum*, whole meal diet of traditional foods available in Hawaii before Western contact, such as taro, poi, sweet potato, yams, breadfruit, and greens (fern shoots and leaves of taro), fruit, seaweed, fish, and chicken. These staples were prepared in a manner that approximated ancient styles of cooking. To approximate the diet of the ancient Hawaiians, which was estimated to contain <10% fat, the amounts of fish and chicken were limited to a total of 142-198 g/d. As a part of the intervention, a whole-person oriented education component perspective was also provided in this program. In the evenings, during the dinner portion of the program, everyone met for cultural or health education sessions. Details of the intervention are described in previous publications.^{8,9}

After-program Follow-up

After each twenty-one day program, the participants organized follow-up for themselves usually in the form of weekly pot-lucks or monthly gatherings for support and the sharing of meals. This fellowship, most often, was undertaken enthusiastically shortly after the program, however, interest dwindled within a few months of each program. Thus, organized follow-up was not consistent. Nevertheless, participants in general, continued to apply the principles of the diet and lifestyle to the extent that they could on their own without much professional support.

Long-term Follow-up Study

Eight years after the first program was conducted, a formal survey was undertaken in order to track the long-term results and efficacy of the program. In order to ensure that the follow-up period was of sufficient length, only those participants who had completed their respective programs one-year or more prior to this survey were included in the pool of eligible participants. An attempt was made to contact each participant in each of the 8 programs who were closely monitored and who completed one year or more prior to the

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follow-up or longer. All participants in these programs with a known phone number or address were called and letters sent in an attempt to schedule them for a physical measurement of their weight.

Each participant who came in for follow-up was weighed on a balance scale similar to that which had been used in all prior programs. In addition, each participant was interviewed as to their knowledge, attitudes and behavior, and a health assessment was conducted. Encouragement and additional health and nutrition education were provided at this interview. The date of each interview was recorded so that the duration since the original diet could be calculated.

Statistical Analysis

The statistical significance of the results of the program was analyzed using a paired, two-tailed test, and a 95% confidence interval for the difference between the means was calculated.

Results

Of the 173 participants in the 8 groups eligible for this follow-up study, we were able to contact and make appointments for 82 individuals for follow-up and weigh-in at the Waianae Coast Comprehensive Health Center. The follow-up period ranged from 12 months to 90 months with an average follow-up time of 33.67 months. As the time of follow-up became greater, a smaller percentage of the participants could be contacted. The attrition rate was due to a number of factors. The most difficult factor was out-migration from the community and inability to locate a current phone number or address. Another factor included the fact that follow-ups were done during working hours and many of the participants were unable to come in for a follow-up due to their employment commitment which contributed further to the attrition rate. Six of the participants of the original programs who would have otherwise been eligible for this survey were deceased.

The original weight loss over the initial three week program in these participants who completed the survey was an average of 13.9 pounds. The overall mean weight loss over all periods of follow-up of the 82 individuals surveyed was 15.1 pounds or 6.85 kg. The greatest amount of weight loss was 174 pounds, 78.9 kg, and the

second greatest amount was 117 pounds, 53.1 kg. The greatest amount of weight gained was 31 pounds, 14.1 kg. Of the 82 individuals, fifty-five (67%) individuals weighed less than they did when they started and 27 remained the same or weighed more. Among these 55 individuals, 43 (52.4%) weighed 10 or more pounds less than when they started; 24 (29.3%) weighed 20 or more pounds less; 15 (18.3%) weighed 30 or more pounds less.

Retained weight loss stratified over time was also examined in figure 1. One would expect the weight loss to diminish with time, especially in light of the studies that indicate that most diet programs see their participants gain their weight lost back in only a few years.^{10,11} Remarkably, however, the retained reduction of weight remained fairly constant over time, when participants are stratified into periods of follow-up at two-year intervals.

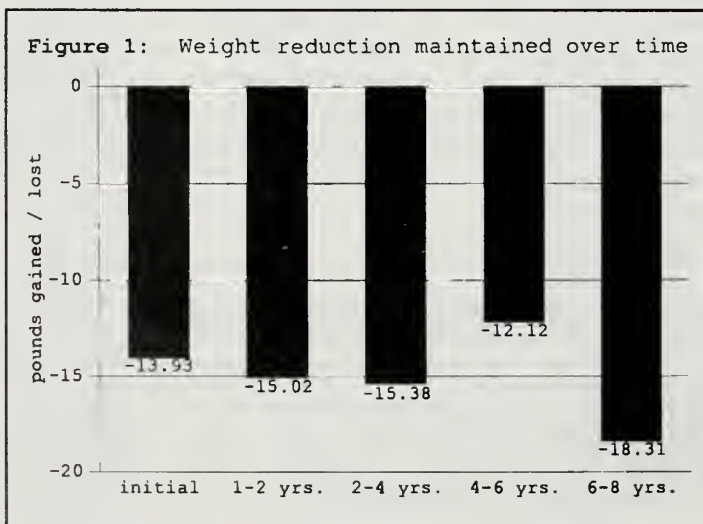
Of the 82 individuals surveyed, 36 of them were surveyed one to two years after their participation in the program and they weighed a mean 15.02 lb or 6.81 kg ($p < 0.0133$) less than they did when they started. There were 28 participants who were in the two to four year follow-up period and they weighed a mean of 15.38 lb or 6.98 kg ($p < 0.0098$) less than that of when they had started. There were 10 participants surveyed in the four to six year time period and their mean weight was 12.12 lb, 5.49 kg ($p < 0.1960$) less than their beginning weight. The remaining 8 individuals were surveyed six to eight years from time of completion of the WDP. They weighed a mean of 18.31 lb or 8.31 kg ($p < 0.0789$) less than what they did at the start of the intervention.

Discussion

The use of an *ad libitum*, low fat, traditional Hawaiian diet has been shown to induce short-term weight loss in obese adults. This phenomenon may be due, primarily, to its high bulk, high carbohydrate, low fat content. Epidemiological studies have positively correlated obesity with high amounts of dietary fat. One reason may be that the high bulk of the diet increases satiety and its low energy density causes a reduction in caloric intake despite an increase in the total amount of food consumed. Other studies of *ad libitum* diets have shown that subjects spontaneously consume less calories on high carbohydrate diets.^{12,13,14} In addition, a low fat diet has a positive correlation with leanness¹⁵ and weight loss^{16,17} independent of caloric intake. This suggests that there are other factors aside from caloric intake that contribute to obesity.

Short term analysis

While the average weight loss of some other weight reduction programs is greater than in this study, those results cannot be compared directly to the results of this program as treatment usually spanned several months longer than this three week program. Therefore, comparisons were made using the rate of weight loss, calculated from the results of original research by dividing the total average weight loss by the duration of treatment. Over the 21 d treatment period, the mean weight loss for all subjects was 2.1 kg/week. Other studies using the low fat approach had substantially lower rates of weight loss than ours.^{18,19,20,21,22,23} Studies using the behavior modification approach also had relatively modest rates of weight loss in comparison.^{24,25,26} One study using the "very low calorie diet" (VLCD) approach had results that were the most similar to our findings,²⁷ but another showed rates similar to those



found using behavior modification alone.²⁸ Our rate even exceeded the rate of weight loss in a study using the combination of VLCD and behavior modification.²⁹

Long term analysis

The success of any obesity treatment program must be measured in terms of weight loss maintenance because obesity is a chronic condition. Atkinson asserts that "life-long follow-up by health professionals... is needed. Maintenance of weight loss or improvement in complications for 6 months is a minimum standard; lesser periods have little meaning." In fact, "full success," defined by Atkinson, "is a 5-year period of weight maintenance [for patients with chronic obesity]."³⁰

Again, due to the relatively short period of the initial program, 21 days, data taken from original research had to be reanalyzed for comparison purposes. Percent weight regain was chosen as a good guideline for comparison as well as a measure of weight cycling. Studies have found that fluctuations in body weight may result in increased long term health risks.^{31,32}

After 8 years of follow-up, on the average, none of the weight lost while on the Waianae Diet Program was regained. While individual weight loss or weight regain varied widely from each individual, the overall average weight loss remained at about 15 pounds. A significant constancy in the amount of weight loss retained through the first four years of follow-up and then at the six to eight year follow-up interval demonstrates that this approach appears to limit the dangers of weight cycling due to the relatively slow rate of weight regain. Continuity of weight loss was maintained over the four to six year interval of follow-up as well, though the level of significance was somewhat marginal.

Few studies have been conducted that demonstrate the success of weight loss programs after two or more years.³³ One behavior modification program conducted by Lavery, et al. yielded similar results to ours, though the amount of weight loss maintained was noticeably less than our results. Participants demonstrated a net weight loss of 5.8 kg at time of a 2 year follow-up.³⁴ Percentage weight regain of three other weight loss programs was significantly higher than ours: Kramer, et al., showed a weight regain two years after a behavior modification program of 62% in group A and 65% in group B.³⁵ The study by Wadden, et al., long term evaluation of VLCD, behavior therapy, and their combination yielded weight regains of 84%, 75%, and 73%, respectively, in a three year follow up.³⁶ In a successive study with a 5 year follow-up, Wadden et al., demonstrated similar results. Only 11.1% of subjects following a VLCD maintained a weight loss of 5 kg or more and 10 kg or more. 13.3% of subjects on behavior therapy maintained a weight loss of 5 kg or more, whereas 0% could maintain a weight loss of 10 kg or more. Combination therapy allowed 27.3% and 9.1% of subjects to maintain a weight loss of 5 kg more and 10 kg or more.³⁷ Hovell, et al., presented subjects who lost a mean of 83.9% of their excess weight, only to regain an average of 59% to 82% of their initial excess weight by 30 months of follow-up.³⁸

Other studies examining the efficacy of an *ad libitum*, low fat, high carbohydrate diet have confirmed its greater effectiveness in promoting sustained weight loss, though their follow-up period was not as extensive: In one such weight maintenance program by Toubro and Astrupin which an *ad libitum* diet or a fixed energy

regimen was administered, 65% of those subjects following the *ad libitum* diet maintained a weight loss greater than 5 kg after one year of follow-up. Comparatively, only 40% of those subjects on a fixed energy intake were able to maintain a weight loss greater than 5 kg at time of follow-up. The *ad libitum* group also maintained 13.2 kg of the initial weight loss of 13.5 kg, whereas the fixed energy intake group maintained 9.7 kg of the initial 13.8 kg weight loss.³⁹ This clinical study and a successive review by Astrup, et al., concluded that, "after a major weight loss, an *ad libitum*, low fat, [high carbohydrate] diet program, appears to be superior to calorie counting in maintaining weight loss 2 years later [from initial treatment]."⁴⁰ Fitzwater, et al., also showed additional average weight loss at two years follow-up: 53% of subjects maintained their weight loss or continued to lose weight; 24% regained some weight, but below that of their pretreatment weight, whereas 23% incurred full weight rebound.⁴¹

The steady maintenance of weight during the 90 month period was remarkable in that the mean weight reduction remained at 15 pounds. While these figures are very promising, they do need to be read with some caution. First it should be noted that as may be expected, as time elapsed, there were fewer participants who could be reached. Thus, the groups with a longer follow-up period had fewer participants: The 4-6 year follow-up group had only 10 participants who were measured in this survey, whereas the 6-8 year group had only 8 participants. This decrease in "n" had a commensurate effect on the significance of the survey results. There may also be some measure of selection bias as some of the individuals may have declined to participate if they had not retained much of their healthy lifestyle and weight control habits. Finally, the individual weight and amount of weight loss varied fairly broadly from individual to individual, especially in the later follow-up intervals. This wide variation had a consequential effect on the associated confidence indexes per time interval, as some participants loss a remarkable amount of weight, while a few gained in weight. Again, the corresponding p-values from the 4-6 year and 6-8 year marks are only moderately reliable as they are not significant. With these cautions in mind, a complete survey of the long-term weight loss of the *ad libitum* feeding of traditional Hawaiian diet reveals a remarkable consistency that suggests an effective long-term dietary intervention.

Assuming the results are real we can at least speculate about what is it about this program that yields these relatively good results. As with other *ad libitum* feeding diets, we experienced results that were superior to simple calorie restriction diets. It appears that an approach to weight loss that features *ad libitum* feeding of foods high in mass to energy ratio yet are low in mass to energy density is an easier approach to maintain than other diets. It may be that a whole person approach, which includes modifications based on traditional Hawaiian diet had a long-term impact on diet and lifestyle changes even without consistent follow-up or support. This has important implications in hard to reach populations such as those with lowered socio-economic status and in minority groups who may be alienated from white-middle class level health education.

Conclusion

In this long-term follow-up survey, the traditional Hawaiian diet administered *ad libitum* is a comparatively effective approach to the

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Table 1.— Overall weight loss results

n	Mean Follow-up Duration	Group Mean Weight Gain/Loss	p-value
82	33.67	-15.11	0.0000265

Table 2.— Mean weight loss stratified over time.

Group	n	Variable	Mean	p-value	Lower 95% CLM	Upper 95% CLM
1-2 yrs	36	Follow-up (mo.)	13.78			
		Mean start weight	242.89			
		Mean end weight	227.88			
		Mean weight +/-	-15.02	0.01	-26.71	-3.32
2-4 yrs	28	Follow-up (mo.)	36.57			
		Mean start weight	257.40			
		Mean end weight	242.03			
		Mean weight +/-	-15.38	0.01	-26.73	-4.03
4-6 yrs	10	Follow-up (mo.)	60.60			
		Mean start weight	266.22			
		Mean end weight	254.10			
		Mean weight +/-	-12.12	0.196	-31.75	7.51
6-8 yrs	8	Follow-up (mo.)	79.38			
		Mean start weight	270.69			
		Mean end weight	252.38			
		Mean weight +/-	-18.31	0.0789	-39.38	2.76

treatment of obesity in terms of rate of weight loss and extended maintenance. Utilizing a whole person approach, including lifestyle behavioral modification, culture-sensitive education, and *ad libitum* feeding of traditional foods, participants on average were able to maintain a consistent weight loss over the course of eight years following the cessation of the initial program.

Some discretion should be exercised however, when interpreting these results. Over the course of follow-up, contact with many of the participants could not be established or maintained for various reasons. Ideally, the number of participants in successive follow-up years should be maintained so as to strengthen the significance of the results. Future studies should also add a control group and provide for closer long-term follow-up so that a larger percentage of the participants from the original interventions may be included in the long-term analysis. It is also suggested that the subjects should be reevaluated at least annually with blood analysis for serum lipids, glucose and other health risk factors to provide an even more detailed survey. Nevertheless, a positive overall performance from this three week, whole person, *ad libitum* program may be an effective long-term weight loss intervention and warrants further study.

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The Dietary Treatment of Inflammatory Arthritis: Case Reports and Review of the Literature

Therasa C. Danao-Camara MD, FACP, FACR and Terry T. Shintani MD, MPH, JD

Abstract

Two patients with seropositive inflammatory arthropathies who experienced clinical improvement on the Waianae diet are presented.

The scientific literature validates the usefulness of fasting in the control of joint inflammation. Elimination diets are variably successful. Fasting followed by a vegetarian diet can produce a sustained positive response measured clinically and by laboratory variables of inflammation; the efficacy of such an approach appears to hinge on the alteration of fecal flora. Swaying the balance of dietary fats in favor of the omega 3 and omega 6 fatty acids has an antiinflammatory effect, but does not appear to correct the basic immunologic processes involved in the development of the arthropathies.

Practical guidelines for the application of this information are offered.

Introduction: The Hawaii Diet Program

The Hawaii Diet is a multi-cultural version of the Waianae Diet which is based on traditional Hawaiian foods. The Waianae diet program was developed at the Waianae Coast Comprehensive Health Center in response to the high rates of obesity and chronic disease in the native Hawaiian population. The selection of food consists of items eaten in Hawaii before the onset of Western influence, including such items as taro (a native potato), poi, sweet potatoes, yams, breadfruit, rootcrop greens, fruit, seaweed, fish and chicken. All items are served raw or steamed. The diet contains less than 10% fat, 12 to 15% protein and 75 to 78% carbohydrate. The Hawaii diet is based on the same macronutrient composition but with multi-cultural foods replacing many of the traditional Hawaiian meals. The Hawaii Diet includes as its staples in addition to poi and taro, whole starches such as brown rice, pasta, vegetables, fruit, legumes and a small amount of seafood or poultry.

Both diets have been shown to be effective in the control of high blood pressure, diabetes and hypercholesterolemia.¹ It has not heretofore been reported to positively influence the activity of the inflammatory arthritides.

Case Reports

Case 1. LS, a 38 year old Japanese female presented with fevers, 20 pound weight loss, joint pain and polyarticular synovitis in the metacarpophalangeal joints and ankles. Antinuclear antibody titer was 1:80 with a speckled pattern, sedimentation rate 53 mm/hr; antibodies to ribonucleoprotein and SSA were present. A presumptive diagnosis of systemic lupus erythematosus (SLE) was made, and the patient was started on low-dose oral prednisone (10 mg/day) supplemented with indomethacin for the control of fever. Hydroxychloroquine 200 mg/day was eventually added as a steroid-sparing agent.

Two years into the disease course, the patient went on the Hawaii Diet. The sedimentation rate dropped from the 70 to 90 mm/hr range to 39 mm/hr. The platelet count, which had been elevated, normalized. The patient lost 10 pounds over 3 months. She reported increased energy, and was able to discontinue indomethacin without recurrence of the fevers. Synovitis disappeared.

The diet was discontinued after three months. Within a month, fatigue, rashes, fevers and joint pain had recurred.

Case 2. HS, a 44 year old female of mixed Hawaiian-European ancestry presented with synovitis in the metacarpophalangeal and proximal interphalangeal joints. She had an antinuclear antibody titer of 1:256, and antibody to DNA of 217 IU/ml (normal < 100 IU/ml). A presumptive diagnosis of systemic lupus erythematosus was made, and the patient was started on prednisone 10 mg/day, hydroxychloroquine 200mg BID and ketoprofen 200 mg/day. The response to oral hydroxychloroquine was less than optimal; this agent was discontinued. Steroid side effects (hyperglycemia, weight gain, fluid retention and Cushingoid facies) prompted the addition of oral methotrexate 10 and then 12.5 mg/week. Prednisone was tapered to 5 mg every other day; doses less than this resulted in disabling synovitis in the small joints of the hands.

The patient went on the Waianae diet program two years into the disease course. Within two months, the patient had discontinued the prednisone. On her own, she also went off the methotrexate a month later. She remained free of pain and synovitis for another month after she went off the diet, at which point both the prednisone and methotrexate had to be restarted.

Neither of these two patients meet strict classification criteria for SLE, but both clearly had an inflammatory arthropathy accompanied by significant serologic markers of autoimmune activity.

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The Dietary Treatment of Arthritis

Interest in the impact of nutrition on disease causation, activity and cure is universal among patients with arthritis. The great majority will attempt some form of dietary manipulation, in large part unsupervised by and even unknown to their physician.²

Clearly, in gout and saturnine gout, dietary forces have a well-defined role, the first being a disorder of purine metabolism and elimination, and the second a lead intoxication state. Obesity is a risk factor for osteoarthritis, especially in the weight-bearing joints. Reiter's syndrome is a reactive arthropathy triggered in some cases by food pathogens. Beyond these well-defined circumstances, however, the role of food in the arthropathies is controversial.

Arthritis as a Food Allergy

The literature is replete with case reports of arthritis and synovitis being temporally associated with the ingestion of certain foods—dairy products^{3,4} gluten⁵ and azo dyes⁶. The behavior of the arthropathy in these situations satisfies classical medical criteria for causation—ie. exacerbation with challenge, remission with dechallenge, and reactivation with rechallenge. By and large, however, these cases are seronegative and nonerosive. More importantly, they are sporadic and fairly rare.

Elemental hypoallergenic diets have been studied in patients with rheumatoid arthritis (RA).^{7,8,9} As a group, patients on these diets tend to do better subjectively, but objective improvements in the laboratory measures of inflammation do not improve significantly. Certain individuals respond better than others, but the magnitude of the response and the number of patients affected favorably are too small to produce statistical significance. The responders tend to be heavier at outset, and tend to have greater disease activity than the non-responders. Van de Laar et al have obtained synovial membrane and small intestinal biopsies on some of these responders. Mast cells and IgE bearing cells are decreased at these sites during dietary manipulation.⁷ The authors postulate that these histologic changes suggest an allergological mechanism underlying the observed arthritis response.

Kavanagh et al⁹ have attempted to sustain improvement by reinstituting feeding selectively. After an elemental diet, patients were refed with one food group at a time. Those food groups followed by a disease flare were eliminated from each individual's maintenance regimen. Even such an individualized approach, however, failed to sustain improvement at 24 weeks.

The Effects of Fasting

Fasting—that is, the voluntary abstention from food for a limited period of time—has been validated as an effective short-term suppressor of inflammation in the arthritides.^{10,11,12} Subjective improvement in pain and stiffness starts within three to five days of the initiation of the fast, and is sustained for its duration. Joint inflammation indices as well as acute phase reactants (sedimentation rate, orosomucoid, haptoglobins) decrease. Return to pretreatment disease activity occurs on the day after the fast is discontinued. In the hands of most investigators, no maintenance diet can sustain the benefits of the fast. (An exception to this observation has been reported, and is reviewed below.)

While almost universal relapse at the termination of the fast makes

fasting an untenable treatment for RA, understanding the mechanisms underlying the clinical response is instructive.

Lymphocytes are affected by fasting. Antigen-specific B cell responses improve.¹³ Suppressor cell activity, usually depressed in RA patients, normalizes with fasting.¹⁴

Neutrophilic functions are also influenced by food deprivation. Release of the pro-inflammatory chemical leukotriene B4 from neutrophils goes down, as does the ability to generate cytotoxins *in vitro*.¹¹ Levels of linoleic and alpha linolenic acids are unchanged; their metabolites, arachidonic and eicosapentaenoic acid increase. Such a profile can be produced by impaired activity of phospholipase and 5-lipoxygenase, enzymes involved in the metabolism of arachidonic acid to leukotriene B4. From these data, Hafstrom et al have postulated stimulus-response decoupling of neutrophil metabolism (reduced ability to generate cytotoxins, reduced leukotriene formation) as mechanisms of the antiinflammatory effect of food deprivation.

Fasting also alters intestinal permeability.¹⁵ Polyethylene glycol molecules penetrate intestinal mucosa less well during fasting; this reverses with refeeding of a lactovegetarian diet. If indeed inflammatory arthritis is an allergic or hyperimmune reaction to foreign antigens, the decreased penetration of immunostimulants may explain the temporary relief experienced by patients on a fast.

The Oslo Cohort

In the late 1980s, investigators in Oslo entered a group of 53 patients with RA in a single-blind controlled trial of diet therapy. Twenty-seven patients were randomized in a four-week stay at a health farm. The control group stayed for four weeks at a convalescent home, but ate an ordinary diet throughout the study period.

Treatment started with a 7 to 10 day subtotal fast. After the fast, one new food item was introduced every second day. If this was followed by an exacerbation in symptoms, the offending food was withdrawn for one week. If a similar exacerbation occurred with later rechallenge, then that food item was permanently removed from the maintenance diet. During the first 14 months, patients were kept on a strict gluten-free vegan diet (ie no meat, fish, eggs, dairy products or food containing gluten). After this period, dairy and gluten were reintroduced. Foods producing a flare in disease activity were recorded in a personal journal. Clinical and laboratory assessments were performed at 1, 4, 7, 10 and 13 months. One year after conclusion of the study (ie 25 months after the initiation of the diet), patients were contacted for follow-up examinations.

The results of this study have been published in a series of related articles covering the clinical, biological, psychosociological and immunologic sequelae of the intervention.^{16, 17, 18, 19, 20, 21, 22}

After four weeks at the health farm, the diet group showed significant improvements in the number of tender, swollen joints, pain, morning stiffness, grip strength, sedimentation rate, C reactive protein, and Health Assessment Questionnaire score (HAQ; a standardized instrument measuring the ease with which one performs the activities of daily living). Rest at a health farm did positively influence disease activity; the control group also demonstrated improved pain scores. Subjective improvement was accompanied by statistically significant drops in platelet counts, total IgG, IgM rheumatoid factor, C3 activation products, and complement compo-

nents C3 and C4, all of which are consistent with an amelioration of immunologic hyperactivity.

A little less than half of the experimental group (10 of the 24 evaluable subjects) could be classified as good responders, defined as having a 2-grade improvement on a subjective global assessment scale plus a 20% or better decrease in joint count, pain score, HAQ, and sedimentation rate. These good responders maintained their improvement at the one-year and two-year evaluation points.

Was there anything unique about these responders—ie are there characteristics that can identify which patients are likely to benefit from dietary intervention prior to the fact?

The investigators did determine that:

- diet responders tended to have had their disease for a shorter time (mean of 6 years versus 14 years for the nonresponders); this is consistent with the response to pharmacologic interventions, implying a more malleable situation in the early inflammatory phases of the disease, before chronic damage is in place,
- diet responders were more likely to be seronegative (30% versus 58% for the nonresponders); this is reminiscent of the data for RA and food allergies, *vide supra*,
- diet responders had a significantly lower belief in the effect of ordinary medical treatment compared with the nonresponders.

The investigators tried to identify laboratory variables that correlated with clinical response. They found that neither immunoglobulin levels nor phospholipid profiles covaried with clinical disease activity. While RA patients were found to have elevated levels of antibodies to food allergens (consistent with generalized B cell hyperactivity), the activity of these immunoglobulins did not correlate with the disease course. Plasma arachidonic acid levels dropped initially and returned to baseline with the lactovegetarian diet; eicosapentaenoic acid levels stayed low throughout the diet. Contrary to findings from the omega fatty acid literature (*vide infra*), plasma phospholipid profiles did not covary with disease activity.

What did appear to be consistently predictive of clinical improvement was a change in fecal flora. Gas-liquid chromatography (GLC) of bacterial cellular fatty acids obtained from stool samples indicated that the microbial profile changes significantly in patients responding to diet therapy.^{22,23} Nonresponders do not exhibit this

variability. Unfortunately, GLC is a sensitive measure of quantitative changes in cell wall profiles, but is unable to determine specifically which bacterial species are decreasing or increasing.

Other Diet Programs

A calorie-optimized diet enhanced with fish meals and antioxidants has been tested in a single-blind 6 month study in Norway.²⁴ Compliance was monitored through a diet diary. While the study is confounded by a 26% drop-out rate, those able to follow the diet demonstrated less morning stiffness, fewer swollen joints, less pain, and reduced medication cost. Objective laboratory data, however, did not change.

The Dong diet has also been put forward as a therapeutic diet for arthritis.^{25,26} This diet was designed by a southern California dermatologist, Dr. Colin Dong. He came down with RA and cured himself by returning to the traditional Chinese diet of his childhood. The diet consists of fish, little meat and occasional fowl, no fruit, herbs or spices, no dairy products, no alcohol, and no additives or preservatives. The diet was tested by the group of Dr. Richard Panush at the University of Florida in a 10-week randomized double-blind study involving²⁶ patients.²⁷ There were no statistically significant differences between the two groups at any point in the study. Interestingly, however, two individuals in the experimental group achieved noteworthy disease control, and elected to remain on the diet after termination of the study. Both had strong personal and family histories of atopy—other than this one observation, nothing else distinguished these remarkable responders from the rest of the subjects.

The Role of Dietary Fats

Fatty acids seem to have some effect on the inflammatory process possibly as a result of their role as precursors to prostaglandins and leukotrienes. N-3 (the designation refers to the location of the first double bond in the carbon chain, counting from the amino terminus) fatty acids are antiinflammatory. The 20-carbon n-6 and n-3 fatty acids arachidonic acid (AA) and eicosapentaenoic acid (EPA) are biosynthetic precursors for n-6 and n-3 eicosanoids of the leukotriene (LT) and prostaglandin (PG) families. The n-6 eicosanoids LTB₄ and PGE₂ are pro-inflammatory, causing neutrophil chemotaxis and activation as well as increased vascular permeability.²⁸ The n-3 homologs are either less active (LTB₅) or poorly synthesized from

Table 1.—Sources, relationships and inflammatory effects of some metabolically important unsaturated fatty acids (adapted from 32). Abbreviations used: PG - prostaglandin, LT - leukotriene, TNF - tumor necrosis factor, IL - interleukin.

	n-6	n-3
18 Carbon Fatty Acids	Linoleic Acid C18:2	Linolenic Acid C18:3
Sources	Soybean, sunflower and corn oil	Flaxseed, canola oil
20 Carbon Fatty Acids	Arachidonic Acid C20:4	Eicosapentaenoic Acid C20:5
Sources	From meat and ingested linoleic acid	From ingested linolenic acid, and from fish and fish oil
Metabolized to	Proinflammatory n-6 PGs and LTs	Competitive inhibitors of n-6 PGs and LT synthesis
Effect on cytokines	Unknown	Suppression of TNF α and IL1b production

EPA (PGE3). Dietary n-3 fatty acids can increase cellular n-3 content and decrease n-6 eicosanoid synthesis.

Dietary n-3 fats also suppress production of the peptide cytokines interleukin 1beta (IL1B) and tumor necrosis factor alpha (TNFa). These cytokines stimulate PGE2 synthesis and collagenase production, and increase expression of adhesion molecules that allow leukocyte extravasation.^{29, 30, 31}

Epidemiologic studies suggest a role for N-3 supplementation in RA. The consumption of baked or broiled fish appears to protect against rheumatoid arthritis,³³ and the use of olive oil seems to have the same effect.³⁴

At least 13 prospective studies on the role of fish oils in the symptomatic control of RA have been published in the English-language literature. These are summarized in Table 2.

Table2.—Experimental studies of n-3 fatty acids in RA. Abbreviations used: EPA - eicosapentaenoic acid, DHA - docosahexaenoic acid, PUFA - polyunsaturated fatty acids, gel - morning stiffness, NSAID - nonsteroidal antiinflammatory drug, LT - leukotriene, IL - interleukin, TNF - tumor necrosis factor.

First Author, Year	Subjects, Study Period	Intervention	Results
Kremer, 1985 (35)	37 12 weeks	1.8 gm EPA; diet high in PUFA, low in saturated fats	less pain and joint swelling, but rebound at the end
Kremer, 1987 (36)	40 32 weeks	2.7 gm EPA 1.8 gm DHA	less fatigue and joint swelling, decreased LTB4
Magaro, 1988 (37)	12 30 days	1.6 gm EPA 1.1 gm DHA	less disease activity; less neutrophil chemiluminescence
Van der Tempel, 1990 (38)	16 24 weeks	2.04 gm 20:5 n-3 1.32 gm 22:6 n-3	less gel and joint swelling, decreased LTB4, increased LTB5
Tulleken, 1990 (39)	27 12 weeks	2.0 gm EPA 1.3 gm DHA	less pain and fewer swollen joints
Kremer, 1990 (40)	49 24 weeks	27 mg/kg EPA 18 mg/kg DHA, vs 54 mg/kg EPA 36 mg/kg DHA vs 6.8 gm oleic acid (olive oil)	more improvement with high dose fish oils; decreased LTB4 and IL1; olive oil also helped
Nielsen, 1992 (41)	51 12 weeks	3.6 gm n-3 PUFA	less gel, less tenderness
Skoldstam, 1992 (42)	43 6 months	fish oil 10 gm/day	decreased NSAID consumption
Espersen, 1992 (43)	32 12 weeks	3.6 gm n-3 PUFA	improved Ritchie's index; drop in IL1; TNF and complement activation products unchanged
Kjeldsen-Kragh, 1992 (44)	67 16 weeks	3.8 gm EPA 2.0 gm DHA with doses of naproxen	fish oils mitigated impact of naproxen withdrawal
Lau, 1993 (45)	64 12 months	10 MaxEPA caps/day	decreased NSAID use
Geusens, 1994 (46)	90 12 months	2.6 gm n-3 vs 6 gm olive oil	decreased medication use only in n-3 group
Kremer, 1995 (47)	66 30 weeks	4.6 gm EPA, 2.5 gm DHA diclofenac withdrawal	diclofenac could be stopped without a flare

N-3 fatty acids suppress joint swelling and decrease pain in a dose-dependent fashion. Inflammatory eicosanoid levels go down. The more traditional laboratory measures of RA activity, such as the sedimentation rate and complement degradation products, as well as the titer of rheumatoid factor, are by and large untouched. The clinical effect lasts no longer than four weeks after the supplements are stopped. The magnitude of the response is not impressive—at best, n-3 supplementation may have some drug-sparing properties, allowing the patient to use lower doses of an antiinflammatory or disease-modifier.

The plasma lipid alterations necessary to achieve clinically significant effects require 10 to 15 MaxEPA capsules a day. The same levels can be achieved by including 4 to 6 meals with fish per week.⁴⁸

Some Practical Advice

What should the practitioner say to a patient who asks about the relationship between non-gout inflammatory arthritis and his or her diet? Data support these guidelines:

1. Inflammatory arthritis is a true food intolerance only in a very small number of patients. These people tend to have seronegative, nonerosive disease.

2. No foods or food groups have been consistently identified as a cause, trigger or aggravating factor in unselected patients. However, if one clearly experiences disease worsening with a particular dietary item, then that item ought to be avoided. Some items that have produced such worsening in a few individuals are dairy products, nitrates, alcohol, simple sugars and azo dyes. Since the ability of these foods and additives to cause disease flares is far from universal, testing one's reaction to each in turn makes better sense than avoiding everything indiscriminately.

3. Fasting clearly suppresses inflammation in the joints. Fasting should not be undertaken without medical supervision for longer than five days. Fasting may be dangerous in the setting of previous or ongoing medication intake, and should be discussed with the medical practitioner. The benefits of fasting are very difficult to sustain, but in some situations can be made to last by switching to a vegan diet. The people who tend to respond favorably to such dietary manipulation tend to be those who have had their disease for a shorter period of time. End-stage, burnt-out disease with severe joint destruction is unlikely to be helped by these measures.

4. Based on the work of Dr. Panush and this current report, reasonable diets to try are the Dong diet and the Hawaii/Waianae diet. Books on both remain widely available in popular bookstores. The responses reported are evident by 10 weeks; there is no data to support staying on these diets longer than that period in the hope of getting a delayed response. It must also be borne in mind that the evidence that these diets work is limited and anecdotal.

5. Omega 3 fatty acids (fish oils) can help suppress joint inflammation. The desired blood levels of the necessary fatty acids can be obtained by eating six fatty fish meal a week. Fish oils are about as effective as an NSAID. They do not reverse the basic immunologic

processes underlying RA.

6. The use of olive oil may be of some benefit.⁴⁰

7. While diet can be a useful adjunct in the treatment of the inflammatory arthropathies, there is no reliable and consistent way to use it as monotherapy. It should be part of an integrated approach that pays attention to proper rest and exercise, work modification, family support, stress management and judiciously selected pharmacotherapy.

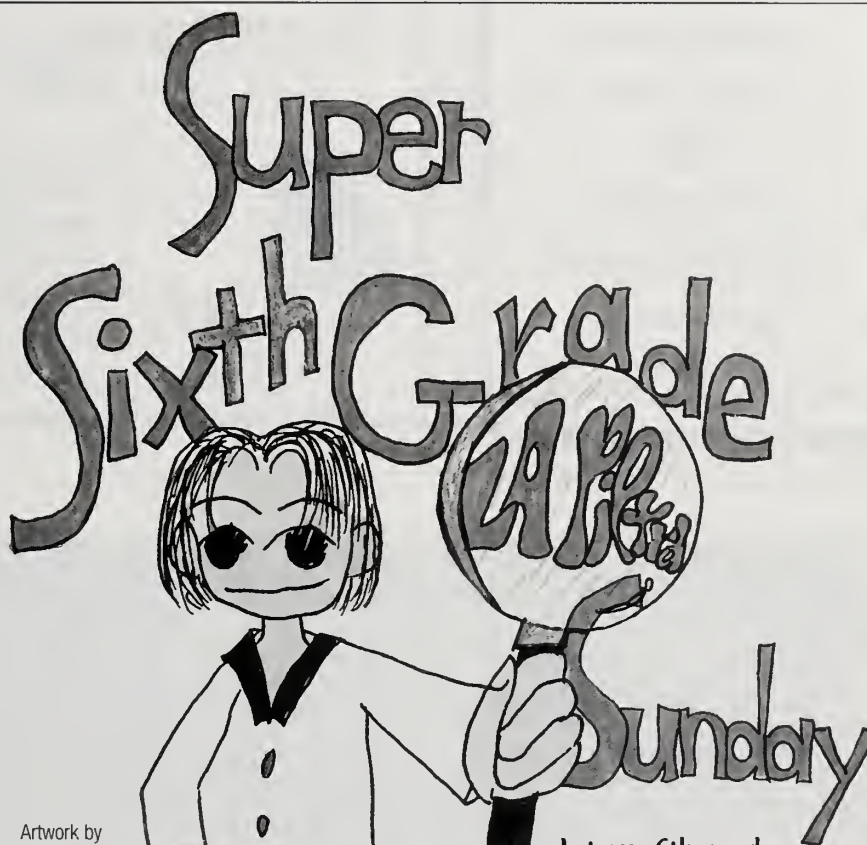
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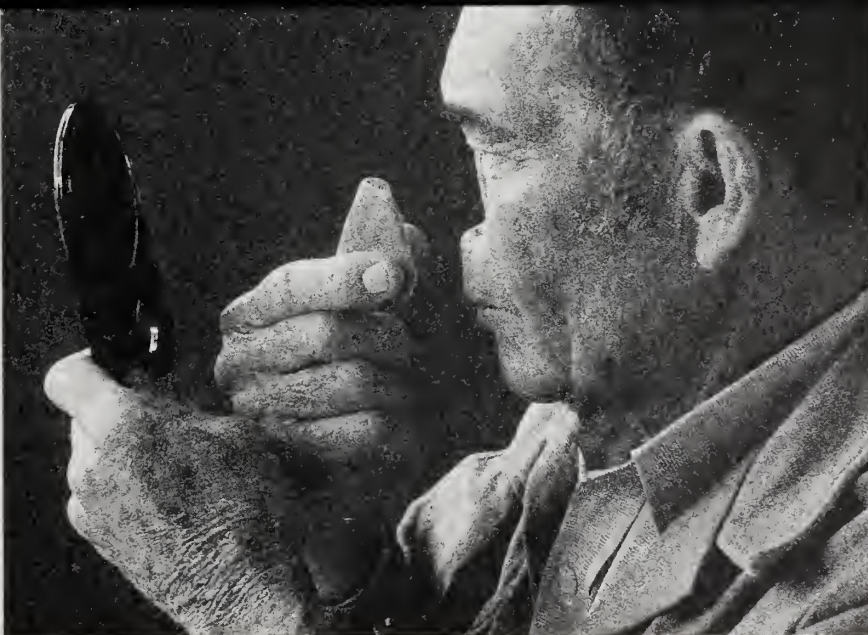
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Life in These Parts... Retired Doctor Lives Aloha

Soft spoken 'Native Hawaiian', Charman Akina grew up in Honolulu, graduated from Punahou and Stanford and practiced plush medicine with the Honolulu Medical Group for 30 years...

Answering an inner call, Charman retired 6 years ago joined the Waimanalo Health Center as an unpaid volunteer who even made house calls. "I thought it was time to practice medicine in a predominantly Hawaiian community, because we're always hearing about the poor health statistics on Hawaiians. I wanted to come to a place that wasn't a "squeaky wheel" – some place that had needs in terms of medical staff and medical care...Coming from a big clinic environment to a rural environment is a real change, but it really rounds out my career and it's been very educational."

Mabel Spencer, one of the clinic founders says, "Charman's patients love him and many followed him from the Honolulu Medical Group. He's the only doctor I know who lets them call him at home – and that's too much, if you ask me."

(Dear Lord...Please make more of us in the image of Charman Akina...)

Life In These Parts...

Myron Shirasu ran into former fellow QMC resident Joe Bautista several years ago and they exchanged news about their families...

Myron: "My daughter is now in Yale."

Joe: "Oh my! What did she do?"

Myron elucidated: "Yale – not Jail."

Only in Hawaii, eh?

"One of my new medical assistant students took a very nice history on a patient and wrote: 'The patient received KIMO THERAPY two years ago.'"

(Norman Goldstein)

Potpourri...

(From Isaac Asimov's Treasury of Humor)

Mrs. Moskowitz and Mrs. Finkelstein met for the first time after a long separation, and inquiries as to status and health at once arose.

"Tell me, Mrs. Finkelstein," said Mrs. Moskowitz, "How is your sister Sadie?"

"Oh Sadie, poor Sadie", moaned Mrs. Finkelstein, "She has cancer."

Whereupon Mrs. Moskowitz said consolingly, "Listen. Cancer, shamancer – as long as you're healthy."

It was rough ocean crossing and Mr. James was suffering the tortures of the damned. He was leaning over the rail, retching miserably, when a kindly steward patted him on the shoulder.

"I know sir," said the steward, "that it seems awful, but remember, no one ever died of seasickness."

Mr. Jones lifted his green countenance to the

steward's concerned face and said, "For Heaven's sake, man. Don't say that. It's only the wonderful hope of dying that's keeping me alive."

Smith met Jones in the clubhouse one day and said, "I understand you experienced great tragedy last week."

Jones sipped his drink and nodded, his eyes growing dark with the memory.

"I was playing a twosome with Brown," he said, "and the poor fellow dropped dead on the 9th hole."

Smith said, "I understand you carried him back to the clubhouse. That must have been difficult, considering he weighed two hundred pounds."

James said, "Oh, it wasn't the carrying that was so hard. It was putting him down at every stroke and picking him up again."

Three buddies died in a car crash and went to Heaven for orientation. St. Peter asked, "When you're in your caskets and friends and family are mourning you, what would you like to hear them say about you?"

"I would like to hear them say that I was a fine doctor and a great family man," the first one replied.

"I would like to hear that I was a wonderful school teacher who made a difference in children's lives," said the second.

"And I, the last fellow said, "would like to hear them say, 'Look he's moving!'"
(From Playboy Apr '99)

Medical Tid Bits...

Re Colon Cancer Prevention?

Physicians from St. Luke's Roosevelt Hospital Center in New York reported at the American Association for Cancer Research annual scientific meeting in April that ASA with Statins may cut down colon cancer risk...

Re Pancreatic Cancer Therapy

Virulizin (an immune system booster derived from cow bile) shows promise in early testing against pancreatic cancer. Dr. Channian Liu of the University of Nebraska presented data on preliminary testing of Virulizin on 26 patients who had failed to respond to Eli Lilly's Gemzar. Their average survival was just over six months, but there were some interesting glimmers. One patient is still alive 22 months later and in another patient, tumor that had spread to the liver completely disappeared, though the patient eventually died of cancer in the lung.

Potpourri II...

(Milton Berle's humor)

The rural doctor came out to the farm to check on the farmer's wife. Upon arrival, the doctor felt thirsty. He walked over to the well to bring up some cool water, but slipped and fell in. The moral is that the doctor should take care of the sick and leave the well alone...

Doctor: You should live to be eighty.

Patient: I'm eighty five.

Doctor: See - what did I tell you.

An elderly lady fills out the registration form in the doctor's office. After the address, the form asks for "Zip." She writes, "Not bad for my age."

Q: What do fishermen and hypochondriacs have in common?

A. They don't really have to catch anything to be happy.

Q: What's the difference between an English actuary and a Sicilian actuary?

A: The English actuary can tell how many people are going to die next year. A Sicilian actuary can give you their names.

Condensation of the medical article: "Vulnerable Plaque; The Future of Heart Disease" by Associated Press reporter, Daniel Haney...(Star-Bulletin Jan 12, 1999)

*Obstructed channels account for 15% of MI's while vulnerable plaques account for 50%. Vulnerable plaques are soft and squishy. The plaques break off and form clots which block one of the three main coronary arteries...This explains a. Why MI's occur in people in peak health b. Why CABG and angioplasty do not prevent MI's and c. Why STATINS decrease the risk of MI's without improving coronary flow.

The vulnerable plaque is an unseen danger (angiograms only show blockage and not the plaque.) Plaques usually grow outward into the arterial wall instead of into the arterial lumen. "By the time you see an irregularity on angiogram (ie the first little 25% narrowing, over 85% of the artery is atherosclerotic)" (Cleveland Clinic's Steven Nissen) "Not all plaques are alike" (Frank Kologie – Armed Forces Institute of Path) Soft plaque: cholesterol ester; Hard plaque: crystalline cholesterol.

The Process: Soft plaques are caused by injury to the arterial wall (ie HTN, smoking, high cholesterol) The body confuses this cholesterol plaque with infection and sends WBC's which in turn produce tissue factor and generates a large clot. The clot comes in contact with blood and metalloproteinase which eat away at the fibrous cap. Our hormonal surge needed to face the day can break the vulnerable plaque. Mechanical forces can easily disrupt this plaque. While a rupturing plaque can lead to a heart attack, most of the time nothing happens. It seems that plaques break all the time and those that trigger heart attacks are the unlucky exception.

Statins have already proven to be a true breakthrough in cardiac protection. For people at high risk, statins reduce the chance of heart attack and death by more than 50% and even in healthy people with normal cholesterol by 20%. The statins probably draw out the soft cholesterol leaving the plaque firmer, more stable and less inflamed, but not necessarily smaller.

Conference Notes...

"Late Life Depression" L. Jaine Fitten, Chief, Geriatric Psychiatry, UCLA Sch of Med, Apr 2 QMC Aud

Introduction:

- Depression among elderly wide spread
- Serious illness in its own right
- Occurs in context of medical illness
- Frequently under diagnosed
- Eminently treatable.

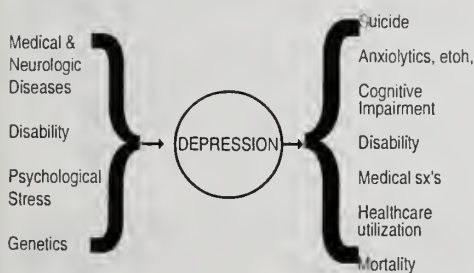
Prevalence of Depression:

- 10% of individuals in elderly community
- 17-37% of primary care elderly
- 50-60% of elderly in nursing homes

Medical Conditions a/c Depression:

- Medications: steroids, cimetidine, anti-hypertensives, NSAID's, sedatives, digitalis, alcohol, opiates, cocaine
- CNS Disease: neurodegenerative disease, CVA
- Heart Disease: Post MI, CHF
- Collagen-Vascular: RA, SLE, TA
- Endocrine: Hypothyroidism, Cushings
- Neoplasm: pancreas, lung, breast
- Renal Disease: dialysis

Causes & Effects of Late Life Depression:



***Suicide rate in U.S. Overall: 12/100,000
Older Caucasian males: 67.5/100,000

Diagnosis: DSM IV Suby types

- Major Depression: Uncomplicated; Melancholic; Psychotic; single episode/recurrent
- Dysthymia
- Minor Depression
- Brief & Recurrent
- Mixed anxiety-depression

Major Depression (5 or more of the following symptoms over 2 weeks)

- Depressed mood or loss of pleasure or interest
- Plus:
 - Change in appetite or wgt.
 - Insomnia or hypersomnia
 - Psychomotor retardation or agitation
 - Feeling of worthlessness or guilt
 - Difficulty thinking, concentrating or deciding
 - Recurrent death thoughts or suicidal feelings

Causes & Effects of Late Life Depression

Clues to Depression:

- In Primary Care: a. Help seeking complaints b. Frequent calls & visits c. High utilization of

service

- In-Hospital Patients: a. CABG, hip Fx, MI, Stroke b. Delayed recovery c. Treatment refused d. Discharge problem
- In-Nursing Home Patients a. Apathy, withdrawal, isolation b. Failure to thrive c. Agitation d. Delayed rehabilitation

Barriers to Dx:

- Disorder itself
- The patient
- The provider
- Health care system

Improve Recognition:

- High index suspicion
- Follow up clues with screening questions: Are you sad? Sleeping poorly? Do you worry too much? What have you enjoyed doing lately?
- Talk to relatives & other professionals
- Use screening instruments: eg CES-D, GDS

Treatment:

- Pharmacologic
- Psycho therapy
- Electroconvulsive therapy
- Combination

Goals of Treatment:

- Decrease & resolve depressive Sys
- Restore psychosocial function
- Prevent relapse or recurrence
- Relieve excess disability
- Help patients accept medical therapies
- Ease adaptation to irreversible loss

STEPS:

(Factors to consider in antidepressant selection)

- Safety - Drug interaction
- Tolerability - Acute and long term
- Efficiency - Onset action, therapy & prophylaxis, activity in sub population
- Payment - Cost effectiveness,
- Simplicity

Side Effects c̄ Antidepressive therapy:

- CNS Effects a. Activation b. Sedation
- GI Side Effects: Weight gain, Weight loss
- Sexual dysfunction
- Cardiovascular: HTN
- Others: Dry mouth, Sweating

Pharmacotherapy: Agents relevant to elderly:

- Tricyclics: Nopramine (Desipramine) Nortriptyline (Pamelar)
- Triazolopyridines: Trazadone (Desyrel) Nefezodine (Serzone)
- MAOIs: Nardil Parnate
- SSRIs: Prozac, Paxil, Zoloft, Celexa
- snri/SDRI²: Effexor, Wellbutin

Prozac: 1987... anxiety & insomnia; appetite suppression

Paxil: sedating (esp nursing home pts); xs sedation in frail pts; sexual dysfunction

Zoloft: less sedating

Celexa: 10 yr experience in Europe; esp geriatric

pts; safe agent; well tolerated by geriatric pts; doesn't block liver enzymes

Dosing:

- Tricyclics: a. Nortriptyline: Start 10 - 25mg hs; 60 - 250mg/cc b. Desipramine: Start 10 - 25mg hs; 115mg/cc

SSRI's	Start	Maintenance
Prozac	10mg/d	10 - 60mg/d
Paxil	10mg/d	20 - 60mg/d
Zoloft	25mg/d	50 - 250mg/d
Celexa	10mg/d	20 - 60 mg/d

Common Errors in Primary Care:

- Anxiolytics used as primary or sole drug
 - Use of amitriptyline; imipramine or doxapine
 - Failure to monitor outcome
 - Failure to monitor side effects and compliance
 - Underdosing
 - Failure to consider drug interactions
 - Early discontinuation
 - Polypharmacy
- **Prozac interferes with conversion of codeine to morphine**

Pharmacokinetics:

- Absorption
- Distribution
- Clearance — metabolism

Referral:

- Problem in DX
 - compliance, unclear presentation
 - Depression mixed c̄ dementia, etoh, benzodiazepam
 - Severe or psychotic depression
 - Suicide risk

2. Problems in Therapy

- Unable to tolerate first line Rx
- Unresponsive to Rx

Conclusions:

- Late life depression is widespread
- Strongly a/c mental illness
- It is a serious illness
- It is eminently treatable
- Proper treatment and management require time and skill

Potpourri III...

A man walked into a drug store and asked the pharmacist if he had something to cure hiccups. The pharmacist promptly reached out and slapped the fellow's face.

"What did you do that for?" the man asked.

"Well, you don't have the hiccups any more, do you?"

"No, but out in the car my wife still does."

Two guys sat down for lunch in the office cafeteria. "Hey, what happened to Pete in pay roll?" one asked.

"He got this harebrained notion he was going to build a new kind of car" his co-worker replied.

"How was he going to do it?"

"He took an engine from a Pontiac, tires from a Chevy, seats from a Lincoln, hub caps from a Caddy and well, you get the idea."

"So what did he end up with?"

"Ten years to life."

Women and Heart Disease



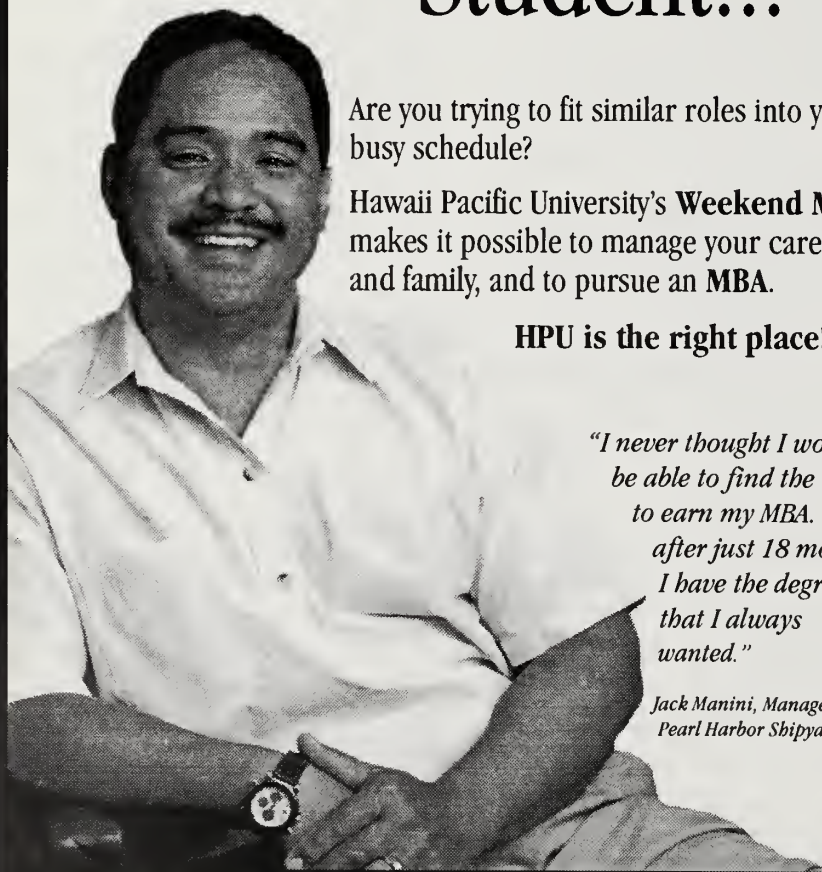
Why coronary heart disease is a major health problem for women:

- As women approach menopause, their risk of heart disease increases and continues to rise with aging.
- Women with diabetes have 3 to 7 times the risk of heart disease as men.
- Fewer women than men are quitting smoking.
- About 44% of women 55 to 64 have high blood pressure.



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Pearl Harbor Shipyard

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To place a classified notice:

HMA members.—Please send a signed and type-written ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in HMJ as space is available.

Nonmembers.—Please call 536-7702 for a non-member form. Rates are \$1.50 a word with a minimum of 20 words or \$30. Not commissionable. Payment must accompany written order.

Office Space

Pearl City Business Plaza.— Tenant Improvement Allowances for Long Leases; 680+ sq ft; 24-hr security; free tenant/customer pkg; Gifford Chang 581-8853 DP, 593-9776, 531-3526.

Ala Moana Bldg.— PHYSICIANS WANTED to share space and support services. Interest in physical rehab. preferred. We have unique time-share arrangements starting at one half-day per week. Run your practice with no fixed overhead. Contact Dr. Speers, REHABILITATION ASSOCIATES, 955-7244.

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You are invited to attend...

– Patient Care Conference –

Herbal Psychotropics

Enrico G. Camara, MD, FAPM

May 4, 1999 4:30 – 5:30 p.m.
Doctors Dining Room

LEARNING OBJECTIVES

At the conclusion, participants should be able to:

- Understand the basic biochemistry of valerian, kava, and St. John's wort as it relates to their psychoactive properties.
- Identify those patients for whom these agents may have a therapeutic role in clinical management.
- Describe risks, side effects and possible interactions with each other and with prescription drugs.

– Ophthalmology Conference –

Unusual Retinal Vein Occlusions

Sherman Valero, MD

May 20, 1999 5:00 – 6:00 p.m.
Queen's Medical Center Imaging Classroom

LEARNING OBJECTIVES

At the conclusion, participants should be able to:

- Describe branch and central vein occlusions.
- Evaluate and measure unusual causes for these disease processes.
- Manage vein occlusions medically and surgically.

– Friday Noon Conference –

Latex Allergy As It Affects Health Care Providers

Carl W. Lehman, MD

May 21, 1999 12:30 – 1:30 p.m.
Doctors Dining Room

LEARNING OBJECTIVES

At the conclusion, participants should be able to:

- Describe the epidemic increase of natural rubber latex allergy during the past 12 years and how to reverse the trend.
- Manage a hospital to be safe for personnel and patients with latex allergy.
- Recognize the seriousness of natural rubber latex allergy to personnel and patients.

– Patient Care Conference –

An Update on Medicine in Hawaii

*Jared Acoba; Rudy de Alday, MD; Dan Canete, MD;
Fort Elizaga, MD; Reuben Guerrero, MD; Keith Kamita;
Robert Pang, & Vince Wong*

May 29-30, 1999 1:30 – 5:00 p.m.
Turtle Bay Hilton

LEARNING OBJECTIVES

At the conclusion, participants should be able to:

- Understand practice guidelines for routine health maintenance screening.
- Summarize the regulatory issues surrounding the proper and legitimate prescribing of opioids for the management of pain.
- Recognize the role of cosmetic pharmaceuticals in improving the appearance of aging skin.
- Review the clinical uses or indications of low molecular weight heparin.

Please call Fran Smith at 522-4471 for more information.



Nothing is So Deceptive of a Man's Statistics, Expect a Woman's Figure.

Most eye surgeons consider it the standard of practice to advise patients not to wear their contact lenses overnight. Corneal infections from that virulent, ugly bug *Pseudomonas aeruginosa* occur not rarely in patients who wear their lenses constantly. Now Bausch & Lomb has claimed a breakthrough with a lens called PureVision that is safe to wear to bed. B&L claims the lens is the result of 10 years research to produce a soft lens of new material that allows more oxygen to reach the cornea while absorbing water. The lens is more comfortable and is approved by the Food and Drug Administration for one-week nonstop wear. "It's certainly going to be much safer than existing products," according to the B&L director of clinical research. However, after just two weeks of promotion, B&L was sued by Johnson & Johnson who alleges that the lens superiority claims were not substantiated. J&J claims that the clinical trial demonstrated "no statistically significant differences" from their own Acuvue lens. Sounds like another make-work project for the attorneys.

A Moralist is One Who Wants You to Live Life His Way.

The anti-abortion website called "The Nuremberg Files" was successfully sued for the sum of \$109 million by various plaintiffs, including *Planned Parenthood*. A Federal jury decided that calling doctors baby butchers, posting pictures of physicians, providing their home addresses, information about their children, and even phone numbers, incited people to violence. By their action the jury limited the scope of constitutionally protected free speech, but the jury saw the posted messages on the website as a "hit list." The message is that physicians should not have to live in fear of violence. Three doctors on the list have been killed by anti-abortion terrorists.

If God had not Meant for us to Procrastinate, He Wouldn't Have Created Infinity.

Our fearless (feckless?) Republican leaders should jump on the bipartisan Congressional report to fix Medicare proposed by Breaux (D.La.) and Thomas (R.Ca.lif.). The plan would save money by gradually raising the eligibility age from 65 to 67. Also, it would allow people to join the existing Medicare plan or they could use a premium allowance to purchase private coverage. It would provide prescription drug coverage for those who cannot afford their medications. The report is less than perfect (latest news is the plan is dead), but much better than the Clinton/Gore intent of merely dumping an additional \$700 billion in taxes into a program that isn't working. The Breaux proposal would fold Parts A and B into one plan (YES!), offer targeted premium allowances to the poorest seniors and encourage purchase of private insurance. The key to saving Medicare is to create a genuine health care market in which people can decide where, whether and how much to spend on their own medical care.

What Really Hurt Humpty Dumpty was not the Fall, but his HMO Said the Surgical Care was not Medically Necessary.

The American Medical Association is pushing for legislative language that will protect patients from the arbitrary decision of insurers to deny payment based upon "not medically necessary." The AMA claims that patients must be given the right to appeal such decisions to an independent reviewer with clinical expertise of the proposed treatment. The scoundrels who lobby for the insurance industry are fighting the language claiming that it will raise health care costs, reduce quality and lead to increases in health care fraud! Doctors are being painted as black-hat types and "fraud and abuse would increase in the private sector if significant deference were to be conferred upon providers." Take a few minutes and contact our Washington people in support of the AMA in this pure patient protection issue.

Nothing is so Bad that It Can't Get Worse.

And yet another insurance insult — The Supreme Court recently supported a Pennsylvania court which ruled that workers-compensation medical

payments may be withheld during a review to determine if they involve reasonable and necessary medical treatment. Every medical care provider knows that insurance companies find any excuse to lengthen the "float" and avoid paying their bills in a timely manner. If a claim isn't perfectly clean it will be delayed or returned for additional data, or faulted for improper numbers, or challenged for whatever. Doctors and hospitals must provide emergency care in a prompt and comprehensive manner or be subject to penalty, but no similar time constraint applies to insurance providers. Business and insurance interests claim the Supreme Court decision will help control health-care costs. Yeah, right! Thanks a lot, Judge.

Some People Smoke Between Meals, Others Eat Between Smokes.

Patricia Henley began smoking at age 15, and now at age 53 she suffers from inoperable lung cancer. Her suit against Philip Morris (Marlboro) blames the tobacco company because she became addicted before there was any warning about health risks. The California jury awarded her \$1.5 million for medical costs, pain and suffering, and ordered Philip Morris to cough up (exhale?) \$50 million in punitive damages. Legal experts consider the case as a marker for additional individual lawsuits despite the settlement of state Medicaid cases. For personal injury attorneys the tobacco industry must appear like a giant mother lode.

There are Two Things that Never Live Up to the Ads—Sin and Circuses.

Those creative advertising people who bring you slick offerings for Viagra the impotence drug and Claritin for allergy, have embarked on a campaign to sell cataract surgery. *Allergan* will place ads for six months in Time, Newsweek, Reader's Digest and Modern Maturity, among others, to inform seniors about the benefits of cataract surgery, but specifically the implant maker wants to plug into that market with their new multifocal device. The American Academy of Ophthalmology estimates that about 13 million Americans have age-related lens opacities, but as every ophthalmologist knows that doesn't mean they all need or would accept an operation. Moreover, the ads come at a time when HCFA is increasing scrutiny of high volume procedures and Medicare contractors and HMOs are cooling toward requests for cataract surgery.

I Have Nothing to Say, and I'm Going to Say it Just Once.

In the private practice of medicine, a day's loss of income cannot be regained. Not merely is there loss of several hundred dollars income, but employee benefits and wages, rent, utilities, security and answering services all go on. In a solo medical practice, a holiday costs at least \$900, which explains why the median for medical practices is six paid holidays per year. Some doctors offer as many as eleven, and eleven holidays a year costs a solo practitioner about \$10,000 per annum.

We're not Attempting to Circumcise the Rules. (Professional football coach)

Worried about when to conceive your child? Get on-line with Babycenter.com The website lists dates of the Super Bowl, the World Series, the Final Four, NBA finals, the Nascar and Indy 500, etc., and then provides information on how to plan the conception of your offspring so you will not fear missing some special event. The idea was originally pitched as a joke, but sports nuts took it seriously. During Super Bowl week, the site attracted over 1,000 visitors per day.

Addenda

- ❖ DUI history - On September 10, 1897, the world's first drunk driver drove his electric car through the entrance of a building in London.
 - ❖ NASA spent \$200,000 for a sanitary napkin disposal for women astronauts in 1992, and it's money well spent.
 - ❖ It is easy to enjoy opera — everything but the music.
- Aloha and keep the faith — rts ■

ATACAND. GET THE POWER™

- Powerful BP reduction @ the starting dose
- First line for hypertensive patients
- Convenient once-daily dosing for 24-hour BP reduction
- Usual starting dose: 16 mg once daily



Please see adjacent brief summary of Prescribing Information.



References: 1. Ruhl M, White WB, Fagan TC, et al. Effects of candesartan cilexetil in patients with systemic hypertension. *Am J Cardiol* 1998;82:961-965. 2. Farsang C, Kowicka-Jaszcz K, Langan J, et al. Antihypertensive effects and tolerability of candesartan cilexetil, amlodipine, and their combination. *Am J Hypertens* 1997;10:60A. Abstract H13. 3. Franke H. Antihypertensive effects of candesartan cilexetil, enalapril and placebo. *J Hum Hypertens* 1997;11(suppl 2):S61-S62.



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BRIEF SUMMARY

Before prescribing, please see full Prescribing Information for ATACAND.

USE IN PREGNANCY

When used in pregnancy during the second and third trimesters, drugs that act directly on the renin-angiotensin system can cause injury and even death to the developing fetus. When pregnancy is detected, ATACAND should be discontinued as soon as possible. See WARNINGS, Fetal/Neonatal Morbidity and Mortality.

ATACAND® (candesartan cilexetil) was effective in reducing blood pressure regardless of race, although the effect was somewhat less in blacks (usually a low-renin population).

CONTRAINDICATIONS: ATACAND is contraindicated in patients who are hypersensitive to any component of this product.

WARNINGS: Fetal/Neonatal Morbidity and Mortality: Drugs that act directly on the renin-angiotensin system can cause fetal and neonatal morbidity and death when administered to pregnant women. Several dozen cases have been reported in the world literature in patients who were taking angiotensin converting enzyme inhibitors. When pregnancy is detected, ATACAND should be discontinued as soon as possible. The use of drugs that act directly on the renin-angiotensin system during the second and third trimesters of pregnancy has been associated with fetal and neonatal injury, including hypotension, neonatal skull hypoplasia, anuria, reversible or irreversible renal failure, and death. Oligohydramnios has also been reported, presumably resulting from decreased fetal renal function; oligohydramnios in this setting has been associated with fetal limb contractures, craniofacial deformation, and hypoplastic lung development. Prematurity, intrauterine growth retardation, and patent ductus arteriosus have also been reported, although it is not clear whether these occurrences were due to exposure to the drug. These adverse effects do not appear to have resulted from intrauterine drug exposure that has been limited to the first trimester. Mothers whose embryos and fetuses are exposed to an angiotensin II receptor antagonist only during the first trimester should be so informed. Nonetheless, when patients become pregnant, physicians should have the patient discontinue the use of ATACAND as soon as possible. Rarely (probably less often than once in every thousand pregnancies), no alternative to a drug acting on the renin-angiotensin system will be found. In these rare cases, the mothers should be apprised of the potential hazards to their fetuses, and serial ultrasound examinations should be performed to assess the intra-amniotic environment. If oligohydramnios is observed, ATACAND should be discontinued unless it is considered life saving for the mother. Contraction stress testing (CST), a nonstress test (NST), or biophysical profiling (BPP) may be appropriate, depending upon the week of pregnancy. Patients and physicians should be aware, however, that oligohydramnios may not appear until after the fetus has sustained irreversible injury. Infants with histories of *in utero* exposure to an angiotensin II receptor antagonist should be closely observed for hypotension, oliguria, and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion. Exchange transfusion or dialysis may be required as means of reversing hypotension and/or substituting for disordered renal function. There is no clinical experience with the use of ATACAND in pregnant women. Oral doses ≥10-mg candesartan cilexetil/kg/day administered to pregnant rats during late gestation and continued through lactation were associated with reduced survival and an increased incidence of hydronephrosis in the offspring. The 10-mg/kg/day dose in rats is approximately 2.8 times the maximum recommended daily human dose (MRHD) of 32 mg on a mg/m² basis (comparison assumes human body weight of 50 kg). Candesartan cilexetil given to pregnant rabbits at an oral dose of 3 mg/kg/day (approximately 1.7 times the MRHD on a mg/m² basis) caused maternal toxicity (decreased body weight and death) but, in surviving dams, had no adverse effects on fetal survival, fetal weight or on external, visceral, or skeletal development. No maternal toxicity or adverse effects on fetal development were observed when oral doses up to 1000-mg candesartan cilexetil/kg/day (approximately 138 times the MRHD on a mg/m² basis) were administered to pregnant mice. **Hypotension in Volume- and Salt-Depleted Patients:** In patients with an activated renin-angiotensin system, such as volume- and/or salt-depleted patients (e.g., those being treated with diuretics), symptomatic hypotension may occur. These conditions should be corrected prior to administration of ATACAND, or the treatment should start under close medical supervision. If hypotension occurs, the patients should be placed in the supine position and, if necessary, given an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further treatment which usually can be continued without difficulty once the blood pressure has stabilized.

PRECAUTIONS: General: Impaired Renal Function: As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals treated with ATACAND. In patients whose renal function may depend upon the activity of the renin-angiotensin-aldosterone system (e.g., patients with severe congestive heart failure), treatment with angiotensin converting enzyme inhibitors and angiotensin receptor antagonists has been associated with oliguria and/or progressive azotemia and (rarely) with acute renal failure and/or death. Similar results may be anticipated in patients treated with ATACAND. In studies of ACE inhibitors in patients with unilateral or bilateral renal artery stenosis, increases in serum creatinine or blood urea nitrogen (BUN) have been reported. There has been no long-term use of ATACAND in patients with unilateral or bilateral renal artery stenosis, but similar results may be expected. **Information for Patients: Pregnancy:** Female patients of childbearing age should be told about the consequences of second- and third-trimester exposure to drugs that act on the renin-angiotensin system, and they should also be told that these consequences do not appear to have resulted from intrauterine drug exposure that has been limited to the first trimester. These patients should be asked to report pregnancies to their physicians as soon as possible. **Drug Interactions:** No significant drug interactions have been reported in studies of candesartan cilexetil given with other drugs such as glyburide, nifedipine, digoxin, warfarin, hydrochlorothiazide, and oral

contraceptives in healthy volunteers. Because candesartan is not metabolized by the cytochrome P450 system and has no effects on P450 enzymes, interactions with drugs that inhibit, or are metabolized by, those enzymes would not be expected. **Pregnancy: Pregnancy Categories C** (first trimester) and **D** (second and third trimesters). See WARNINGS, Fetal/Neonatal Morbidity and Mortality. **Nursing Mothers:** It is not known whether candesartan is excreted in human milk, but candesartan has been shown to be present in rat milk. Because of the potential for adverse effects on the nursing infant, a decision should be made whether to discontinue nursing or discontinue the drug, taking into account the importance of the drug to the mother. **Pediatric Use:** Safety and effectiveness in pediatric patients have not been established. **Geriatric Use:** Of the total number of subjects in clinical studies of ATACAND® (candesartan cilexetil), 21% were 65 and over, while 3% were 75 and over. No overall differences in safety or effectiveness were observed between these subjects and younger subjects, and other reported clinical experience has not identified differences in responses between the elderly and younger patients, but greater sensitivity of some older individuals cannot be ruled out. In a placebo-controlled trial of about 200 elderly hypertensive patients (ages 65 to 87 years), administration of candesartan cilexetil was well tolerated and lowered blood pressure by about 12/6 mmHg more than placebo.

ADVERSE REACTIONS: ATACAND has been evaluated for safety in more than 3600 patients/subjects, including more than 3200 patients treated for hypertension. About 600 of these patients were studied for at least 6 months and about 200 for more than at least 1 year. In general, treatment with ATACAND was well tolerated. The overall incidence of adverse events reported with ATACAND was similar to placebo. The rate of withdrawals due to adverse events in all trials in patients (7510 total) was 3.3% (i.e., 108 of 3260) of patients treated with candesartan cilexetil as monotherapy and 3.5% (i.e., 39 of 1106) of patients treated with placebo. In placebo-controlled trials, discontinuation of therapy due to clinical adverse events occurred in 2.4% (i.e., 57 of 2350) of patients treated with ATACAND and 3.4% (i.e., 35 of 1027) of patients treated with placebo. The most common reasons for discontinuation of therapy with ATACAND were headache (0.6%) and dizziness (0.3%). The adverse experiences that occurred in placebo-controlled clinical trials in at least 1% of patients treated with ATACAND and at a higher incidence in candesartan cilexetil (n=2350) than placebo (n=1027) patients included back pain (3% vs. 2%), dizziness (4% vs. 3%), upper respiratory tract infection (6% vs. 4%), pharyngitis (2% vs. 1%), and rhinitis (2% vs. 1%). The following adverse experiences occurred in placebo-controlled clinical trials at a more than 1% rate but at about the same or greater incidence in patients receiving placebo compared to candesartan cilexetil: fatigue, peripheral edema, chest pain, headache, bronchitis, coughing, sinusitis, nausea, abdominal pain, diarrhea, vomiting, arthralgia, albuminuria. Other potentially important adverse events that have been reported, whether or not attributed to treatment, with an incidence of 0.5% or greater from the more than 3200 patients worldwide treated with ATACAND are listed below. It cannot be determined whether these events were causally related to ATACAND. **Body as a Whole:** asthenia, fever; **Central and Peripheral Nervous System:** paraesthesia, vertigo; **Gastrointestinal System Disorder:** dyspepsia, gastroenteritis; **Heart Rate and Rhythm Disorders:** tachycardia, palpitation; **Metabolic and Nutritional Disorders:** creatine phosphokinase increased, hyperglycemia, hypertriglyceridemia, hyperuricemia; **Musculoskeletal System Disorders:** myalgia; **Platelet/Bleeding-Clotting Disorders:** epistaxis; **Psychiatric Disorders:** anxiety, depression, somnolence; **Respiratory System Disorders:** dyspnea; **Skin and Appendages Disorders:** rash, sweating increased; **Urinary System Disorders:** hematuria. Other reported events seen less frequently included angina pectoris, myocardial infarction, and angioedema. Adverse events occurred at about the same rates in men and women, older and younger patients, and black and nonblack patients. **Laboratory Test Findings:** In controlled clinical trials, clinically important changes in standard laboratory parameters were rarely associated with the administration of ATACAND. **Creatinine, Blood Urea Nitrogen:** Minor increases in blood urea nitrogen (BUN) and serum creatinine were observed infrequently. **Hyperuricemia:** Hyperuricemia was rarely found (19 or 0.6% of 3260 patients treated with candesartan cilexetil and 5 or 0.5% of 1106 patients treated with placebo). **Hemoglobin and Hematocrit:** Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.2 grams/dL and 0.5 volume percent, respectively) were observed in patients treated with ATACAND alone but were rarely of clinical importance. Anemia, leukopenia, and thrombocytopenia were associated with withdrawal of one patient each from clinical trials. **Potassium:** A small increase (mean increase of 0.1 mEq/L) was observed in patients treated with ATACAND alone but was rarely of clinical importance. One patient from a congestive heart failure trial was withdrawn for hyperkalemia (serum potassium = 7.5 mEq/L). This patient was also receiving spironolactone. **Liver Function Tests:** Elevations of liver enzymes and/or serum bilirubin were observed infrequently. Five patients assigned to candesartan cilexetil in clinical trials were withdrawn because of abnormal liver chemistries. All had elevated transaminases. Two had mildly elevated total bilirubin, but one of these patients was diagnosed with Hepatitis A.

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ATA01

INTRODUCING ATACAND. A NEW SIGN OF POWER IN BP REDUCTION.

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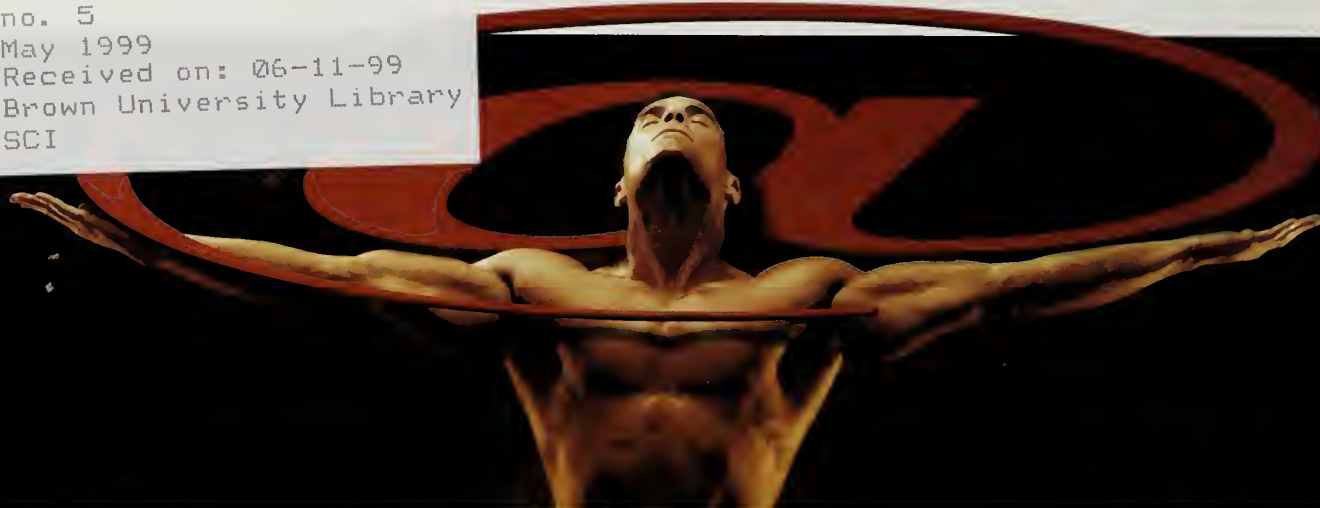
A new angiotensin II receptor blocker (ARB) with power @ every dose

- New once-daily ATACAND has significant power to reduce blood pressure (BP) at the 16-mg starting dose. And a dosage increase to 32 mg leads to an even greater reduction in BP.¹
- ATACAND delivers effective BP reduction when compared to amlodipine at the starting doses and to enalapril (at doses of 10 mg enalapril, 8 mg ATACAND).^{2,3}
- The most common adverse events that occurred with ATACAND in placebo-controlled clinical trials with an incidence greater than placebo were URI (6% vs 4%), dizziness (4% vs 3%), and back pain (3% vs 2%).

Exhibits a potent and long-lasting effect @ the AT₁ receptor site*

- ATACAND gets @ the site where angiotensin II causes vasoconstriction.
- ATACAND stays @ the site, where its antihypertensive effect is not overcome by angiotensin II.

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Kamehameha

The statue of King Kamehameha was unveiled by King Kalakaua in 1883.



Editorial

Norman Goldstein MD
Editor, Hawaii Medical Journal

Latex Issue

This month we have two excellent manuscripts by authorities on the natural rubber allergy problem, Carl Lehman MD and John McDonnell MD. Attorneys Gary Galiher and Richard DeRobertis review some of the legal aspects of this growing medical problem. This is an issue that should be of interest to all physicians and other health providers.

Hand Eczema in a Nurse

I recently received this Letter to the Editor:

Dear Dr. Goldstein:

I have had a great deal of problems with hand eczema over the years. As an OR night nurse (and wife of a physician), I have used many different types of creams, ointments, and gloves, and I still have problems. I understand this is a very common problem in physicians' wives - too many samples available?

Because you are one of the senior dermatologists in Hawaii, I know you must have many patients with similar problems. I write to you so you might offer advice, not just to me but the other nurses, physicians' wives, and others afflicted with hand eczema.

Sincerely yours,

X, R.N. (Name withheld upon request)

Dear Nurse X:

The Journal usually does not print anonymous letters, but in your case we will, and are happy to do so.

Yes, hand eczema is a very common problem in my practice. In fact, when I was doing the "Doctor Is In" TV news program with George "Granny Goose" Groves, hand eczema was the second most frequent complaint, after acne, that viewers called-in to cure.

Hand eczema is a multi-faceted problem. Primary irritants include soaps and detergents, especially for individuals with atopic personal and family histories.

Allergic contact dermatitis may be caused by many creams and lotions that contain preservatives, perfumes and other inert substances that can produce a true allergic reaction. Allergy patch tests with the TRUE Test or similar kits can elicit the cause of this type of dermatitis.

Dyshidrosis or pompholyx is a sweat-retention, blistering condition of the hands and, in some people, the feet as well. Since heat, humidity, and stress make this disorder worse, gloves are usually not very helpful.

Gloves can actually contribute to hand dermatitis, not just by occluding the sweat glands but also by causing a true allergy, frequently to latex (see the manuscript in this Special Issue on Latex Sensitivity).

Superpotent topical steroids, while very helpful for short periods, can cause atrophy if used for prolonged treatment.

What else can be done? I usually do not patch test all of my hand eczema cases; only the ones that do not respond to treatment. Protective barrier creams may be useful.

There are many products such as SBR Lipocream, Proteque, Armadillo, Pro-Q or Preen that are especially beneficial for nurses, dishwashers, cooks, bartenders, and some housewives. I direct the patient to apply the SBR (Skin Barrier Repair) Lipocream or other protectant three or four times daily. Short courses of Class I (the superpotent steroids) are okay for a week or two. Then reduce the potency to a mid-potency strength, and subsequently to a lower, weaker topical steroid.

Short courses of oral steroids are also excellent in difficult cases. But, watch out for all those samples your husband brings home. Over-treatment can make your condition worse!

Norman Goldstein MD, Editor



Special Commentary

Salvaging a community treasure at UH by Max G. Botticelli MD

The John A Burns School of Medicine is a casualty of the war of words that so often replaces rational decision-making in the political process.

While actively recruiting a dean for the school of Medicine, University of Hawaii President Kenneth Mortimer, decrying a lack of support for the school, suggested a plan to the UH Board of Regents that no new students be admitted. He later insisted that he would not stop admissions.

Gov. Ben Cayetano, recognizing the need for a medical school if the state is to have a viable health care industry, suggested that the school be privatized and that the funding for this new institution be obtained from a Mainland institution. The reiterative message from UH regent Ah Quon McElrath ignores the value of this institution to our community while overstating the relative value of the School of Public Health.

Is it any wonder that two candidates for dean have turned down substantial offers to leave their posts at Yale and University of California at San Francisco? Whether calculated or not, the effect of these words was to damage the reputation of the School of Medicine and jeopardize its existence as a part of the University of Hawaii.

If we are to salvage this community treasure, the public statements intended to manipulate the political process must stop and be replaced by rational planning. Part of that planning should be to consider a medical school outside the University of Hawaii.

The John A. Burns School of Medicine exists today because its namesake, the late Gov. John A. Burns, realized the importance of educational institutions to the well-being of this community. He

visualized the medical school both as a provider of educational opportunities and as part of Hawaii's economical infrastructure. The school has fulfilled this vision well:

- It has educated physicians, most of whom were born and raised in these Islands and a number of whom are Native Hawaiians.
- It has provided residency training for many of Hawaii's practicing physicians.
- It has improved the quality of care delivered in Hawaii through its partnerships with hospitals.
- It brings medical research projects to Hawaii that would not otherwise be possible.
- It supports the good works of charitable institutions such as the Queen Emma Clinics, the Kalihi Palama Health Clinic, and the Waianae Coast Comprehensive Health Clinic.

These accomplishments alone should call for preservation of the medical school. But the school is also needed if Hawaii is to compete effectively in a competitive global health care market. Our competitors in this market include the University of California at San Francisco, Stanford University, the University of California at Los Angeles, the University of Oregon, and the University of Washington.

The faculties of each of these heavily endowed institutions are more expert at providing state-of-the-art medical care than any existing health care institution in Hawaii is, or likely to be in the foreseeable future. Furthermore, they are accessible and they provide care at a much lower cost.

If we are serious about the development of a health care industry, we must, as the Governor suggests, either partner with one or more of these institutions or build that expertise using existing Hawaii institutions as a base. In either instance a healthy and prosperous John A. Burns School of Medicine would be essential to provide the required academic, scientific and research base for such an industry.

Make no mistake, however, the school would have to be better than it is right now to provide this base effectively. To repair the damage this political babble has wrought and to set this venerable institution back on course, an aggressive and well thought-out plan is required. Such a plan is unlikely to come from the University of Hawaii.

A John A. Burns School of Medicine unencumbered by politics, a bureaucratic administrative structure, and an anachronistic tenure system would be better suited to help Hawaii develop a thriving healthcare industry. So privatizing the school makes sense.

Hawaii Pacific University has shown how a well-managed educational institution can effectively chart a course even in troubled economic times. A plan for the UH School of Medicine should consider and emulate its success.

What the Governor and the Legislature should do is continue the funding of the medical school at the present level, declare an end to any speculation about the future of the school, and begin a planning process that would include its privatization. Cayetano should set the context of the planning process by outlining its basic principles. He should insist that this new John A. Burns School of Medicine have:

- An understanding of the economics of higher education and the capability of responding to the vicissitudes of the marketplace.
- A commitment of academic freedom, the pursuit of quality and its educational mission.
- Steady and reliable funding including generous contributions from

each of the institutions that stand to gain from a global healthcare market.

- A mechanism for faculty practice to generate additional funding.
- Fiscal responsibility without micromanagement or manipulation by the funding sources.
- Subsidization by the state for the cost of training students from Hawaii, but no state subsidization for out of state and foreign students who are solely responsible for the cost of their education.
- A business plan that includes the marketing of the medical school as an educational institution for Asian students, which has proven to be successful at Hawaii Pacific University.

Health care and health care education traditionally has been considered a function of tax exempt, not-for-profit institutions. Present day economic realities have changed health care providers, for better and for worse, into bottom-line oriented businesses.

The John A. Burns School of Medicine is a valuable resource that should continue to do what it does so well: train our young men and women to be physicians. If this requires that it become bottom-line business oriented, so be it.

Let's stop the talk and start the planning.

Max G. Botticelli is Emeritus Professor of Medicine University of Hawaii John A. Burns School of Medicine

Editor's Note:

Mahalo to The Honolulu Advertiser and Dr. Max Botticelli for permission to reprint the above article. In 1964, I recall speaking with the late Dr. Harry I. Arnold, Jr. about a new medical school. We both felt that a medical school in Hawaii was not a luxury, but a necessity. There were some physicians who, for various reasons, felt the Medical School was not a good idea.

As a Clinical Professor of Medicine of Dermatology at the UH, dozens of students and residents have taken electives through my offices and many other HMA members. Those interactions benefit both student and teacher.

The Hawaii Medical Association just conducted a survey of its members about the medical school. Twelve percent were opposed, but 88 percent wanted the Hawaii Medical Association to aggressively lobby to preserve our Medical School. Max Botticelli makes an excellent case for privatization of the medical school. Hawaii and the Pacific need the John A. Burns School of Medicine with or without its connection to the University of Hawaii.



Special Contribution

Maine May OK Assisted Suicide

From the Honolulu Star-Bulletin 4/15/99,

HAWAII'S WORLD

By A.A. Smyser

The second state to approve physician-assisted suicide probably won't be Hawaii. More likely, it will be Maine. Hemlock U.S.A., which founded the national right-to-die movement in 1980, thinks chances are bright there for voter petitions to put it on Maine's November ballot next year and win.

Hemlock U.S.A. is committing a minimum of \$250,000, its largest one-year contribution so far, to help Maine organize its fund-raising and get ballot signatures. Faye Girsh, national president, says Maine polls and population breakdowns are even more favorable than were those in Oregon, the first state to ratify.

She sees little danger of repeating the 2 to 1 licking administered to a Michigan proposition last year. That fight, she says, was pushed locally without adequate organization or funding.

Available money was pretty well used up getting ballot signatures. In the final weeks before the vote there were insufficient funds to counter the millions spent on media saturation bought by Right to Life forces.

Girsh spoke here at a Hemlock Hawaii meeting last month along with Derek Humphry, founder of Hemlock. Humphry traced the growing success of the movement from a California defeat in 1988 up to the 60-40 Oregon victory in 1997. He believes more than half of all states will legalize physician-assisted suicide and/or euthanasia on request by the year 2020.

Girsh and Humphry believe assisted-death forces can win in Maine even while being outspent by Right-to-Life and the Catholic Church foes, just as happened in two Oregon votes in 1994 and a re-ratification by a far bigger margin in 1997. Humphry reported continuing rear guard actions in Oregon. Twelve bills in its 1999 legislature would further restrict assisted suicide - even though only 15 of Oregon's 29,000 deaths were under the law last year.

In Congress, Rep. Henry Hyde, of impeachment fame, is a leading advocate for a bill forbidding the Food and Drug Administration to approve medications for assisted death, an unconscionable override of the U.S. Supreme Court's unanimous 1997 decision to leave choice in dying "to the laboratory of the states."

Girsh has an idea that conceivably could be used in Hawaii. This would be to reduce enabling legislation to a single sentence or paragraph. It would allow right-to-die help if carried out under accepted rules.

The Legislature would leave these rules to the Department of Health to adopt subject to approval by the Governor. This would transfer the long haggles over details from the limited 60-day legislative session to a forum able to operate without time limits.

Our 1999 Legislature, perhaps bloodied by the 1997-98 fights over same-sex marriage, had no wish to even look at the details of the assisted-death law proposed by Governor Cayetano's Blue Ribbon Panel on Living and Dying With Dignity, on which I served. Neither the Senate nor the House invited testimony from the chairman of the panel!

Committees in each house ran through the charade of listening for a few hours to anyone who wanted to speak, then shelved the bills at least until next year. Only a single senator listened most of the time.

Hawaii polls consistently show strong support for legalizing doctor-assisted death under strict controls. National polls show similar support.

Girsh speaks of the right to die as "the ultimate civil right."

A.A. Smyser is the Star-Bulletin's contributing editor. His column runs Tuesday and Thursday.

Editor's Note:

Mahalo to A.A. "Bud" Smyser and the Honolulu Star-Bulletin for permission to reprint the 4/15/99 Hawaii's World. Whatever your opinion, this article will keep you up to date on the right to die issue.



Medical School Hotline

JABSOM Celebration of Medical Education 1999

Richard Kasuya, MD
Associate Professor, Department of Medicine
Office of Medical Education

Gwen S. Naguwa, MD
Associate Dean for Student Affairs
Associate Professor, Department of Pediatrics

The University of Hawaii John A. Burns School of Medicine (JABSOM) has always maintained a strong commitment to research, service and education. In another demonstration of the latter, the School of Medicine recently completed a week of activities emphasizing various aspects of teaching/learning titled "JABSOM Celebration of Medical Education." Co-sponsored by the Hawaii Chapter of the Alpha Omega Alpha Honor Medical Society, the University of Hawaii Department of Medicine, and the Office of Medical Education, the week's activities included lectures, work-

shops, informal discussion and a first-ever medical education poster session.

The week was organized around the visiting professorships of two nationally and internationally-acclaimed medical educators: Dr. David Irby (Vice Dean of Education at the University of California at San Francisco School of Medicine) and Dr. LuAnn Wilkerson (Senior Associate Dean of Education at the University of California at Los Angeles School of Medicine). Together, they represented over 50 years of experience and accomplishment in the areas of faculty development, clinical teaching, problem-based learning and medical education research. Throughout the week, Drs. Irby and Wilkerson provided a series of workshops and plenary sessions on a spectrum of topics with titles ranging from "Ambulatory Teaching Lite: Less Time but More Fulfilling," "The One Minute Clinical Preceptor," "Exploring the Relationship Between PBL Tutor Behavior and Student Performance," "What Makes Small Group Learning Powerful," and "Preparation and Delivery of Dynamic Presentations." Dr. Irby also presented the 1999 Alpha Omega Alpha Lecture on "Distinguished Clinical Teachers of Medicine: What They Know, How They Reason, and What They Do." In addition to these sessions, Drs. Irby and Wilkerson met informally with interested faculty throughout the week to discuss areas of common interest.

One of the highlights of the week was JABSOM's first Medical Education Poster Session. Over 30 posters on medical education, patient education, and community programs were presented by faculty, fellows, residents and medical students, with representation from over twelve departments and offices within the medical school, several associated community programs, and three medical school classes. In addition to providing another opportunity for faculty, students and community partners of the medical school to write abstracts and design posters, participants as well as attendees learned of the wide variety of programs, studies and community service activities which are conducted by and take place within the medical school. Many of them are presented at national or local meetings but are not well publicized within the school.

One of the primary objectives of the week was to reach out and involve as many of our faculty, residents and students as possible. With this purpose in mind, sessions were held at various sites within the community. It is estimated that over 250 different faculty and over 100 fellows or resident physicians attended at least one of the sessions, and many attended multiple sessions throughout the week. Participants also included community physicians, medical students, social scientists, educational specialists, and others. While the focus was primarily for our local medical education community, the symposium also attracted visiting faculty from Sung Kyun Kwan University Medical School (Korea) and Tokyo Women's Medical College (Japan). Like JABSOM, both of these schools utilize problem-based learning as their primary educational paradigm which provided some exciting and engaging discussion and cross-fertilization of ideas throughout the week.

Feedback regarding the week's activities from the visiting professors, faculty, and students was extremely positive. Drs. Wilkerson and Irby were especially impressed by the enthusiasm and commitment of all the participants, and planning already is underway for the next "Celebration."

The energy, commitment and participation of the faculty, learners and community partners in events such as the "JABSOM Celebration of Medical Education" are the ingredients which enhance the educational opportunities and experience provided at the University of Hawaii John A. Burns School of Medicine. This never-ending dedication to improve as teachers and learners will continue in fulfilling the mission of the School of Medicine.

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Medical Claims Conciliation Panel Annual Report to the 1999 Legislature

Kathryn S. Matayoshi, Director,
Hawaii State Department of Commerce and Consumer Affairs

Introduction

The Medical Claims Conciliation Panel ("MCCP"), is a program of the Department of Commerce and Consumer Affairs ("DCCA"), State of Hawaii. The MCCP was established twenty years ago by Act 219, 1976 Session Laws of Hawaii, Hawaii Revised Statutes ("HRS") §671-11.

The MCCP program is responsible for conducting informal conciliation hearings on claims against health care providers before such claims can be filed as lawsuits. The decisions of the MCCP panels are advisory in nature and are not binding on the parties, in the event that any party still wishes to pursue the matter via the courts.

The real value of the MCCP program is demonstrated if the parties make conscientious and thorough presentations to the MCCP. In such cases, the decisions rendered by the panels provide the parties with fairly accurate advisory determinations of the relative merits of the claims, which should assist the parties in evaluating whether the claims should be pursued through the judicial system.

The MCCP program also provides opportunities for the parties to exchange information in a relatively expedited and inexpensive manner, which in turn provides for opportunities for the parties to explore the conciliation of meritorious claims prior to such claims being brought before the courts.

Lastly, the requirements of exchanging information between the parties, and making conscientious and thorough presentations to the panels, discourage the pursuit of frivolous or fraudulent claims, prior to further legal proceedings being taken by the parties.

In order to provide the Legislature with a comprehensive review of the MCCP program, the MCCP Annual Report to the 1998 Legislature covers the period of January 1, 1998, through December 31, 1998.

(See Flowchart of the MCCP Process on next page)

The Medical Claims Conciliation Program

In 1998, we continued to improve the processing and hearing of MCCP claims, as well as streamlining the MCCP procedures to minimize unnecessary costs and procedural requirements.

We also made significant strides in making MCCP informational materials and forms available to more people in more formats and media.

Expedited Claims Filing Process

The Expedited Claims Filing Process continues to be utilized by a growing number of parties, and in 1998 there were 25 claims filed utilizing the expedited claims process.

The Expedited Claims are ensured of faster processing through the entire MCCP process, sometimes as quickly as four months from the date of filing to the completion of the MCCP hearing. Additionally, because these expedited cases utilize other facilities to host the hearings, we have been able to schedule more hearings for claims brought under the regular MCCP filing process, because of the increased availability of the MCCP hearings room.

Streamlining of the Process for the Production of Records

Another area of improvement to the MCCP process that was undertaken in 1998, was to change how subpoenas for the production of medical records were issued, and the means by which the subpoenas had to be fulfilled.

Because the MCCP hearing process does not follow the formal rules of evidence, requests for the production of medical records can be made without the need and expense of formal discovery procedures. However, some of the parties to MCCP claims continued to utilize the more formal means of requiring the production of records. This formal discovery process required the custodian of records to appear at a court reporter's office and swear under oath that the documents produced were true and accurate copies of the documents requested, or to answer written interrogatories attesting to the authenticity of the documents produced. This level of formality increases both the cost and the logistical difficulties in producing medical records for MCCP proceedings.

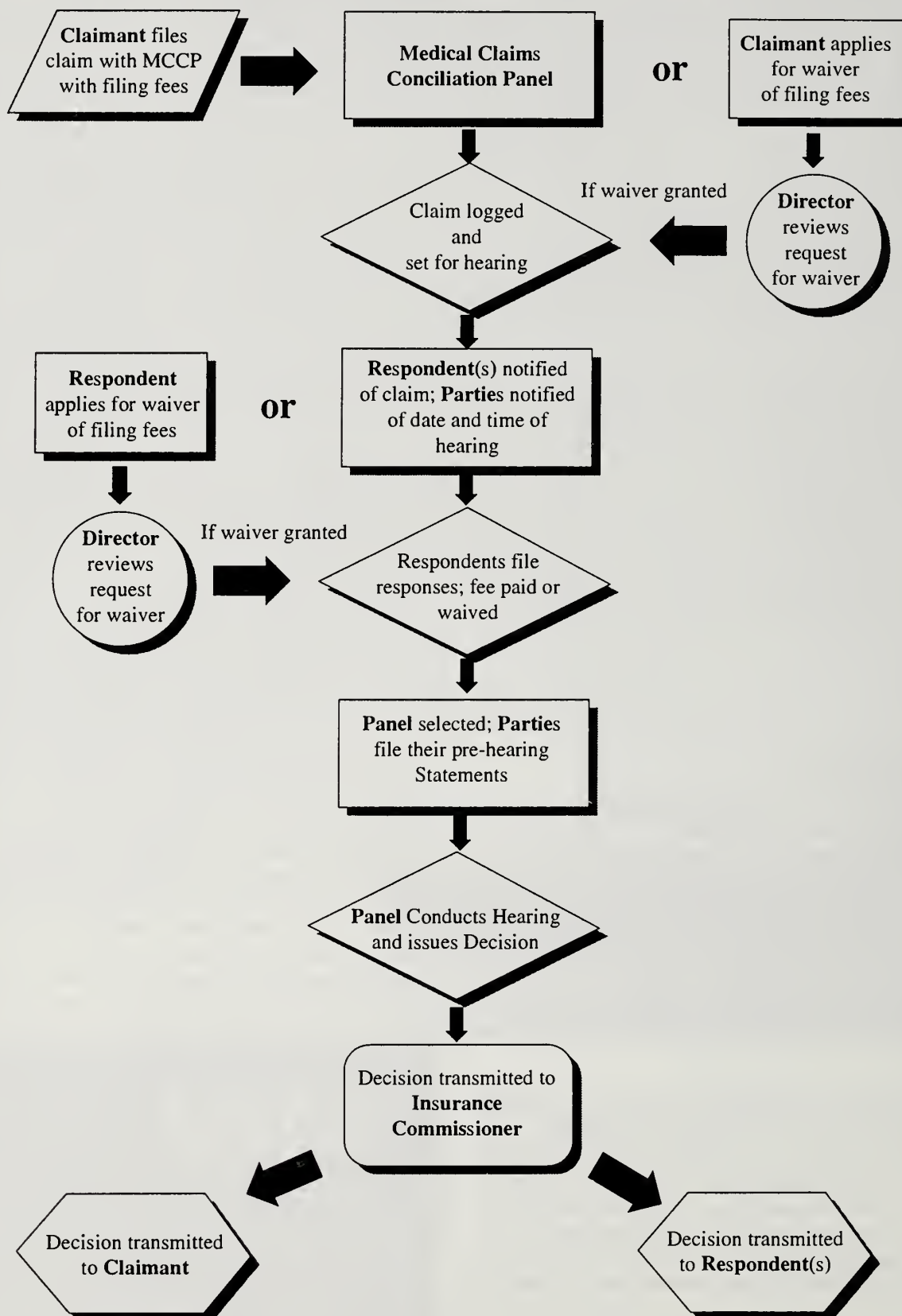
Consequently, we initiated a new procedure that allows the individual or entity subpoenaed to deliver or send copies of the subpoenaed records to the person requesting the documents or a designated representative, along with a statement regarding the accuracy of the copies submitted. The new procedures greatly simplify both the preparation and the transmission of medical records to a requesting party.

Request to Appoint Specific Panel Chairpersons

In order to allow the parties themselves to become involved in the selection of a panel chairperson for a particular case, in 1998, we implemented a new procedure whereby the parties can submit a written request to the director of the Department of Commerce and Consumer Affairs, to have a specific eligible Panel chairperson appointed to serve as the Panel Chairperson for a particular case.

If the parties express a desire to use this process, a list of eligible panel chairpersons is provided to the parties. The parties can then

Flowchart of the MCCP Process



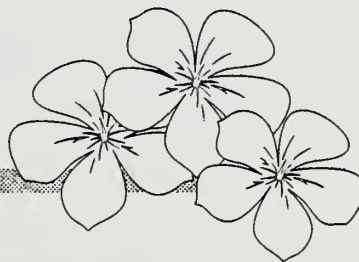
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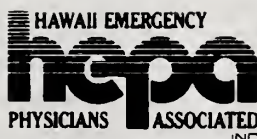
Kapiolani Health Hawaii Quest

Straub Care Quantum

Veteran's Administration

HMAA

Worker's Compensation



Natural Rubber Latex Allergy, An Epidemic in the Health Field

Carl W. Lehman MD

Abstract:

The object of this paper is to educate health care providers of the markedly increased incidence of natural rubber latex (NRL) allergy to epidemic proportions during the past 10 to 12 years. A review of latex allergy problems in health care providers as well as patients is presented. Also reported is a questionnaire survey of institutions listed with the Health Care Association of Hawaii.

Introduction:

Natural rubber latex proteins are products derived from the milky fluid (latex) commercially produced from the rubber tree, *Hevea brasiliensis*. Synthetic latex, as used in latex paints, does not cause allergic reactions in patients with natural rubber latex allergy. For easier reading, "latex," unless otherwise indicated, will refer only to natural rubber latex in this article.

The incidence of latex allergy has markedly and progressively increased by an estimated 64 fold during the past 10 years. The seriousness of an anaphylactic reaction to latex is compounded by the fact that many items commonly used to treat anaphylaxis may contain latex which if used, violates the primary principal of avoiding further exposure to the allergen inducing the reaction.

This article addresses significant latex allergy problems that affect both patients and health care providers who are affected with latex allergy when they, themselves, need health care. Also reported is a study of a survey of 18 Hawaii hospitals and 4 nursing homes.

Methods:

A cursory review of the literature concentrating on review articles, was done to provide basic information about latex allergy in this article. Questionnaires with a letter of explanation were sent to the Chief Executive Officer or comparable person of 41 member institutions of the Health Care Association of Hawaii. The recipient was asked to answer question #1 and refer the other questions to the most appropriate individual in that institution for a response. Twenty-two completed questionnaires were returned. The questions were condensed to the subject addressed in each question and the results are tabulated in table 1.

Correspondence to:
Carl W. Lehman, M.D.
Queen's Physicians Office Building II
1329 Lusitana Street, Suite 603
Honolulu, HI 96813

Table 1

Subject of Question	Yes	No	N/A	Other
1. Aware of latex allergy epidemic	20	1		see text
2. Facility has a latex allergy committee	15	5	1	
3. Has operating room(s) entirely latex free	4	2	9	5 alternatives
4. Latex free patient rooms	15	2	1	2
5. Number of employees at risk of latex allergies	8,301	5,486		see text
6. Known employees with latex allergies	67			see text
7. How do you address latex sensitive employees				see text
8. Use latex powdered gloves:				
a. in hospital rooms only	4			1 options
b. only with direct contact with patient	13			
c. in all departments	7	6		1 options
9. Factors considered in purchasing latex gloves				
a. least concentration of latex protein	6			
b. less processing chemicals in gloves	13			
c. hypoallergenic gloves		9		1
d. list other factors	13			see text
10. Understanding of hypoallergenic gloves				
a. less latex in gloves	0			
b. less processing chemicals in gloves	6			
c. both of the above	13			2 see text
11. Would you like an education session (latex allergy problems)	10	10		1
12. Would you like additional material regarding subject of latex allergy	11	10		

Results:

The yes/no answers are self explanatory with a few exceptions as noted under other "see text".

The one "no" answer on question #1 was from a hospital that is properly addressing latex allergy problems. The "no" response was due to being unaware of the "epidemic" aspect.

Questions #5 & #6: The total number of employees listed by the various hospitals and other facilities responding was 14,238. The number of supportive workers that have direct contact with patients is listed in table 1: Sixty-seven known latex sensitive employees reported in the study is 0.52% of the total number of workers employed. Of this number, 9 were contact allergic dermatitis only.

Question #7: One hospital that is latex-free had no cases. No one was terminated from employment due to latex allergy. One was assigned to another job. Thirteen changed to wearing non-latex

gloves. Two of these were also assigned to another job.

Question #9d: Other factors listed as significant in determining purchase of latex gloves were availability, various details of contracts, user need, elongation properties, specific objective RAST and LEAP data, powder-free, and characteristics that provide protection required for infection control.

Questions #11 & #12: The author participated in providing a 1 hour education session, using a video tape and slides to discuss latex allergy problems at each of 3 hospitals. Information was sent to all of those requesting additional information in question #12.

Summary:

This study reveals that key personnel from each organization are well aware of the problem of latex allergy being on the increase. While 2/3 of the institutions in this study are appropriately addressing problems with latex allergy, 1/3 need to take significant action. Most of these requested assistance to address their problems. In this survey, the incidence of known latex allergic individuals reported is below that expected for the general population and about 20 times less than expected in health care workers. If cases of latex sensitive workers are missed or not addressed, those sensitized health care workers with continued exposure to latex are likely to become progressively more sensitive and develop a more severe illness. Severe allergic reactions may cause devastating health problems for the sensitized employee including rare cases of inability to perform duties, sometimes in highly specialized jobs, and lead to very costly workers' compensation payments.

Discussion:

Type I, IgE mediated latex allergic reactions may be severe, causing disability or even death. Sensitization results from exposure of susceptible individuals to latex rubber proteins possibly enhanced by presence of endotoxin which may act as an immunologic adjuvant. Presence of these potential allergens varies tremendously among manufacturers and even from batch to batch¹. Allergic

reactions to a wide range of medical products that contain latex have been reported including latex surgical gloves, adhesive bandages, intravenous catheters, and anesthesia equipment. Latex gloves are the largest single source of exposure to these potent allergens². Exposure to a latex allergen may be by direct contact with an offending device^{3,4} or by inhalation of allergen carried by the cornstarch powder with which most powdered gloves are coated⁵⁻⁶.

The clinical manifestations of latex allergy range from classic contact urticaria (Type IV reactions) to contact urticarial syndrome and systemic allergic reactions culminating in anaphylaxis (Type I reactions). Continued exposure to latex in sensitized persons may progress to generalized IgE-dependent allergic responses including generalized urticaria or pruritis, rhinoconjunctivitis, asthma, or anaphylaxis which may present as hypotension, shock, respiratory failure, and may be fatal⁷. Treatment of an anaphylactic reaction may be with items that contain latex materials and further worsen the anaphylactic reaction (see table 2)⁸⁻¹¹.

Latex occupational exposure from powdered gloves, especially in asthmatics, may lead to persistent impairment and, although rarely, prevent a worker from remaining in that environment. The American Academy of Asthma, Allergy and Immunology and the American College of Asthma, Allergy and Immunology boards of directors issued a positional statement concerning the use of powdered and non-powdered natural rubber latex gloves¹². The following steps should be taken to lessen risk of exposure to latex rubber proteins: Latex gloves should be used only as mandated by accepted Universal Precaution Standards. The routine use of latex gloves by food handlers, house-keeping, and medical personnel in low risk situations (e.g. food handling), bed transport, routine physical examination) should be discouraged. Only low allergen latex gloves should be purchased and used. This may reduce the occurrence of reactions among sensitized personnel and should reduce the rate of sensitization¹³⁻¹⁵. Only powder-free latex gloves should be purchased and used. This will nearly eliminate latex aeroallergen levels and exposure¹⁶⁻¹⁸.

As of September 30, 1998, the Food and Drug Administration (FDA) issued a final rule requiring that all products containing natural rubber latex that contacts humans, state: "Caution, This

Table 2.—Common Medical Devices Containing Latex	
USED IN THE HOSPITAL	IN ANESTHESIA EQUIPMENT
Mattresses found on stretchers	Rubber masks
Rubber gloves	Electrode pads, e.g., electrocardiogram, peripheral nerve stimulator
Adhesive tape	Head straps
Urinary catheters	Rubber tourniquets
Electrode pads	Rubber nasal-pharyngeal airways
Wound drains	Teeth protectors
Stomach and intestinal tubes	Bite blocks
Condom urinary collection devices	Blood pressure cuffs (inner bladder and tubing)
Protective sheets	Rubber breathing circuits
Enema tubing kits	Reservoir breathing bags
Dental cofferdams	Rubber ventilator hoses
Rubber pads	Rubber ventilator bellows
Fluid circulating warming blankets	Rubber endotracheal tubes
Hemodialysis equipment	Latex cuffs on plastic tracheal tubes
Ambu bags	Latex injection ports on intravenous tubing
Bulb syringes	Certain epidural catheter injection adapters
Elastic bandages, AceTM wraps	Multidose vial stoppers
Medication vial stoppers	Patient controlled analgesia syringes
Stethoscope tubing	Injection ports on intravenous bags
Band-AidsTM and other similar products	
Gloves - examination and sterile	
Patient controlled analgesia syringes	
Tourniquets	

Product Contains Natural Rubber Latex Which May Cause Allergic Reactions”¹⁹.

The regulations also require the removal of the “hypoallergenic” claim on products that removed certain additives that may cause contact dermatitis, but still contain latex; even if at reduced levels of latex as it is a misleading claim since small amounts of latex can trigger allergic reactions. This change in requirement of labeling should greatly facilitate treatment facilities in identifying latex items.

Bauer et al. demonstrated that those subjects with latex specific IgE antibodies worked in rooms contaminated with latex aeroallergens at levels of 0.6 ng/m³ or greater. They demonstrated that as long as powdered latex gloves are used in hospitals, latex allergens will be spread into the air of hospital rooms. Latex aeroallergens were present in all rooms without ventilation systems and in 4 of the 16 rooms with ventilation systems and fresh air supply. The concentration of latex aeroallergens ranged from 0.4 to 205 ng/m³. A relationship was not found between total dust and latex aeroallergens concentration on the basis of an investigation of 30 rooms. One effective measure shown to eliminate or reduce latex sensitization, especially in those health workers already sensitized, is to control the spread of latex aeroallergens in working environments with use of powder-free latex gloves²⁰.

A brief review of the history of immediate hypersensitivity reactions to latex demonstrates that, indeed, an epidemic of natural latex rubber allergies has occurred during the past 10 to 12 years. The first reported reactions to latex were in Germany, in 1927. The

next published case appeared 52 years later. The earliest North American reports were published simultaneously in 1989. Over the next 4 years, the US FDA received over 1,100 reports of injury including 15 children with spina bifida who died due to exposure to latex cuffs on barium enema catheters. These cuffs have since been replaced with silicone. An additional 1,700 reports of severe allergic reactions from latex in medical devices were received in the following 10 years²¹.

According to Sullivan, recent estimates place the prevalence of clinically important IgE sensitivity to latex at nearly 1% of the total US population, 5 to 17% of health care workers and as high as 65% of patients with spina bifida. Approximately 2% of the personnel working in general hospitals appear to have asthma caused by inhalation of latex dust and as many as 20% of these health care workers are expected to become too ill to continue to work in their current hospital environment. An estimated prevalence of less than 3% of health care workers in 1987 has increased to exceed 10% in 1995²². At another conference, Sullivan presented similar data and points out the magnitude of the problem in tables 3 & 4²³.

Health care workers, children with spina bifida and urogenital abnormalities and workers with unconditional exposures to latex are at high latex sensitivity risk. In addition, atopic individuals are at high risk and in combination with the above increased exposures have a compounded increase risk to develop increased sensitivity to latex. To identify IgE mediated sensitivity one may use skin prick tests or blood tests such as RAST tests to verify the presence of specific IgE antibodies to latex²³.

Patients who have immediate hypersensitivity to latex must be treated in a latex controlled environment. Such an environment would be free of latex gloves in the patient’s room and surgical suite. No latex accessories such as listed in table 2⁸⁻¹¹ should come in contact with the patient. Means to prevent non-sensitive individuals from becoming sensitive would be to use latex gloves with negligible allergen content. Powder-free latex gloves and non-latex gloves and other medical items should be purchased to minimize exposure to latex allergens⁷.

Patients with a diagnosis of latex allergy by history or skin testing and a history of anaphylaxis to latex, should wear a medical identification bracelet, carry a medical identification card or both. It is important for them to carry epinephrine and antihistamines for self-administration. In addition, they should take non-latex gloves to their dentist and physicians who may need to do examinations using gloves.

In a volunteer study group of 247 nurses who were recruited from the Operating Room Nurses Association of Canada Annual Meeting, all underwent skin prick testing with extracts of five latex gloves. One-hundred-thirty-five (54.7%) described allergic symptoms attributed to latex exposure. Of these only 12 (4.9%) tested positive to latex extracts alone, 12 (4.9%) tested positive to food extracts alone, and 5 (2.0%) tested positive to both latex and cross reacted to foods tested (kiwi, banana, avocado, and potato). Three of the 17 (17.6%) nurses who tested positive to latex had no history of reacting to latex.

Indirect latex ELISA was done on the serum of the skin test positive patients with a 70.6% sensitivity.

Table 3.—Scope of Latex Allergy Epidemic

Estimates of the prevalence of IgE to natural rubber latex antigens in various US populations:

- <1% of the general population.
- 1-6% of allergic rhinitis and asthma patients skin test positive (1% at Emory '94-'99).
- 6-7% of blood donors RAST positive, 2% strongly positive.
- 5-17% of RN, MD with frequent glove use.
- 20-30% of atopic exposed RN, MD.
- 50% of spina bifida patients.
- (6-8% of dentists and dental assistants report latex allergy on questionnaire).

Table 4

	#(1992)	IF % LA**	# WITH LA
*HCW in hospitals	4,848,300	8%	387,864
Ltx asthma in hospitals		2%	96,966
HCW in MD offices	1,472,700	8%	117,816
DDS offices	542,000	8%	43,360
Surgeons	135,000	8%	10,800
Total MD	687,000	8%	54,960
Total US population	255,000,000	0.5%	1,275,000
Medical students	15,554 new at risk/year		
Nursing students	72,230 new at risk/year		

*HCW - Health Care Workers ** LA - Latex Allergy

Fifty-four percent of the participants attributed symptoms to latex exposure. The most common symptom was a rash on the hands, itchiness, and scaling. Eleven of 17 (64.7%) of the nurses testing positive to latex had two or more symptoms referable to either skin with rash or blistering, eyes with ocular swelling, burning or itching, or respiratory with symptoms of cough or wheeze.

Thirty-nine of the 135 (28.8%) reported reactions to latex products other than gloves. A history of atopy was strongly associated with the latex skin prick test positivity. Thirty-five of 230 (15.2%) non-reactors, have a history of atopy compared with 9 out of 17 or 52.9% reactors with a history of atopy. A large number of nurses wearing latex gloves noted irritation of their skin. It should be noted that both delayed hypersensitivity to latex and irritant dermatitis would explain many of these individuals problems.

To date there is no standardized latex solution available for assessing these patients. Testing done in Canada with natural rubber latex allergen provided a positive response in 94% of subjects who also reacted to 1 or more of the glove extracts.

This suggested that prick skin testing with a battery of glove extracts of known protein content may be used for accurate evaluation of natural rubber latex allergies²⁴.

The clinical history in patients with type 1 IgE mediated latex reactions is often both convincing and compelling. However, it alone is not sufficient to definitively establish a diagnosis of latex allergy.

Hamilton, et al, reports a multicenter latex testing efficacy study using non-ammoniated latex. The extract, processed by Greer Laboratories which was prepared from sap taken directly from the *Hevea brasiliensis* tree and serially tested at doses of 1, 100, and 1,000 mcgm per ml using a prick puncture technique with bifurcated needles.

The clinical history combined with 1 or 2 stage latex rubber glove provocation assay was used to determine the definitive allergic latex status of 324 subjects enrolled in the study. The diagnostic specificity of the agent was demonstrated to be 100% and the sensitivity was 95% at the 100 mcgm per ml concentration with none of the patients in the non-latex allergic group developing a positive skin test response. At the 1,000 mcgm per ml concentration, the diagnostic sensitivity and specificity were 99% and 96% respectively.

The report of this study is promising and hopefully latex skin testing material will soon become available to assist in a definitive diagnosis. A definitive diagnosis is particularly important as it relates to social, occupational, and other legal ramifications of the condition²⁵.

Conclusion:

In conclusion, natural rubber latex allergy has increased tremendously during the last 10 to 12 years. The most common exposure in health care workers is to latex gloves. Powdered latex gloves creates a significant environmental problem in acting as a vehicle to allow the latex proteins to be airborne. The use of powdered latex gloves should be discontinued in all health care facilities including physicians offices, hospitals, and other health care facilities. Anaphylactic reactions to latex proteins are especially serious and compounded if an anaphylactic reaction is inadvertently treated with devices containing latex. Latex contact to mucosal or serosal surfaces may produce anaphylaxis in sensitive persons who only develop dermatitis with skin contact.

Latex allergy diagnosis is made by taking an appropriate history to establish atopy in the patient and/or allergic type reactions when the person is exposed to latex products. RAST or similar tests may be of value, but are not definitive to establish the diagnosis. Hopefully, standardized skin test materials will be available soon. Prevention is to minimize exposure and to decrease the risk of sensitization by purchasing non-latex products or latex products with a low content of latex and minimal endotoxin contaminant. Treatment of the sensitized patient is by avoidance of exposure and symptomatically if exposed. Labeling latex products and appropriately excluding the misleading term "hypoallergenic" from labels on latex products dispensed after September 30, 1998 will assist in more appropriate purchase of products and implement improvement of manufacturers standards. The study reported in this article indicates that continued education of health care workers in Hawaii regarding the subject of latex allergy must be pursued.

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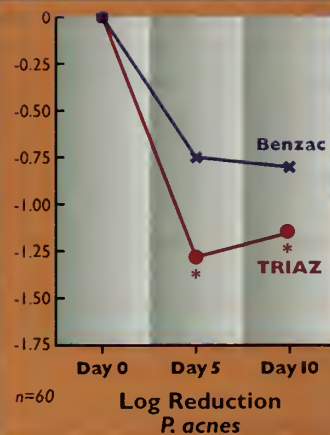
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Bacteriologic cultures were obtained using the Williamson & Kligman technique.

No adverse reactions were experienced during this study.

Allergic contact dermatitis and dryness have been reported with topical benzoyl peroxide therapy. See full prescribing information for further information.

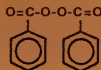
[†]Data on file

¹Benzac is a registered trademark of Galderma.

^{*}IMS Audit, March 1999.

TRIAZ® (benzoyl peroxide) Full Prescribing Information

DESCRIPTION: TRIAZ 6% and 10% Gels and TRIAZ 6% and 10% Cleansers are topical, gel-based, benzoyl peroxide containing preparations for use in the treatment of acne vulgaris. Benzoyl peroxide is an oxidizing agent that possesses antibacterial properties and is classified as a keratolytic. Benzoyl peroxide ($C_{14}H_{10}O_4$) is represented by the following chemical structure:



TRIAZ 6% and TRIAZ 10% Gels contain, respectively, Benzoyl Peroxide 6% and 10% as the active ingredient in a gel-based formulation consisting of Water, C12-15 Alkyl Benzoate, Glycerin, Cetyl Stearyl Alcohol, Glycolic Acid, Polyacrylamide (and) C13-14 Isoparaffin (and) Laureth-7, Glyceryl Stearate (and) PEG-100 Stearate, Steareth S-2, Sodium Hydroxide, Steareth S-20, Dimethicone, Zinc Lactate, Disodium EDTA. TRIAZ 6% and TRIAZ 10% Cleansers contain, respectively, Benzoyl Peroxide 6% and 10% as the active ingredient in a vehicle consisting of: Glycerin, Petrolatum, C12-15 Alkyl Benzoate, Sodium Cocoyl Isethionate, Water, Special Petrolatum Fraction, Sodium C14-16 Olefin Sulfonate, Zinc Lactate, Carbomer, Potassium Polymetaphosphate, Titanium Dioxide, Triethanolamine, Glycolic Acid, Lavender Extract, Menthol.

CLINICAL PHARMACOLOGY: The mechanism of action of benzoyl peroxide is not totally understood but its antibacterial activity against *Propionibacterium* acnes is thought to be a major mode of action. In addition, patients treated with benzoyl peroxide show a reduction in lipids and free fatty acids, and mild desquamation (drying and peeling activity) with simultaneous reduction in comedones and acne lesions. Little is known about the percutaneous penetration, metabolism, and excretion of benzoyl peroxide, although it has been shown that benzoyl peroxide absorbed by the skin is metabolized to benzoic acid and then excreted as benzoate in the urine. There is no evidence of systemic toxicity caused by benzoyl peroxide in humans.

INDICATIONS AND USAGE: TRIAZ 6% and 10% Gels and TRIAZ 6% and 10% Cleansers are indicated for the topical treatment of acne vulgaris.

CONTRAINDICATIONS: These preparations are contraindicated in patients with a history of hypersensitivity to any of their components.

WARNINGS: When using this product, avoid unnecessary sun exposure and use a sunscreen.

PRECAUTIONS: General: For external use only. If severe irritation develops, discontinue use and institute appropriate therapy. After reaction clears, treatment may often be resumed with less frequent application. These preparations should not be used in or near the eyes or on mucous membranes.

INFORMATION FOR PATIENTS: Avoid contact with eyes, eyelids, lips and mucous membranes. If accidental contact occurs, rinse with water. Contact with any colored material (including hair and fabric) may result in bleaching or discoloration. If excessive irritation develops, discontinue use and consult your physician.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Data from several studies employing a strain of mice that are highly susceptible to developing cancer suggest that benzoyl peroxide acts as a tumor promoter. The clinical significance of these findings to humans is unknown. Benzoyl peroxide has not been found to be mutagenic (Ames Test) and there are no published data indicating it impairs fertility.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Animal reproduction studies have not been conducted with benzoyl peroxide. It is not known whether benzoyl peroxide can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Benzoyl peroxide should be used by a pregnant woman only if clearly needed. There are no available data on the effect of benzoyl peroxide on the later growth, development and functional maturation of the unborn child.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when benzoyl peroxide is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: Allergic contact dermatitis and dryness have been reported with topical benzoyl peroxide therapy.

OVERDOSAGE: If excessive scaling, erythema or edema occurs, the use of this preparation should be discontinued. To hasten resolution of the adverse effects, cool compresses may be used. After symptoms and signs subside, a reduced dosage schedule may be cautiously tried if the reaction is judged to be due to excessive use and not allergenicity.

DOSAGE AND ADMINISTRATION: TRIAZ Gels Apply once or twice daily to cover affected areas, or as directed by your dermatologist. Use after washing with a mild cleanser, such as one of the TRIAZ Cleansers, and water.

TRIAZ Cleansers: Wash affected areas once or twice daily, or as directed by your dermatologist. Avoid contact with eyes or mucous membranes. Wet skin and liberally apply to areas to be cleansed, massage gently into skin for 10-20 seconds working into a full lather; rinse thoroughly and pat dry. If drying occurs, it may be controlled by rinsing cleanser off sooner or using less often.

HOW SUPPLIED: TRIAZ 6% Gel - 1.5 oz. (42.5 g) tube, NDC 99207-051-01. TRIAZ 10% Gel - 1.5 oz. (42.5 g) tube, NDC 99207-210-01. TRIAZ 6% Cleanser - 6 oz. (170.3 g) tube, NDC 99207-116-12. TRIAZ 10% Cleanser - 3 oz. (85.1 g) tube, NDC 99207-106-02. TRIAZ 10% Cleanser - 6 oz. (170.3 g) tube, NDC 99207-106-12. Caution: Federal law prohibits dispensing without prescription. Store at controlled room temperature: 15°-30°C (59°-86°F).

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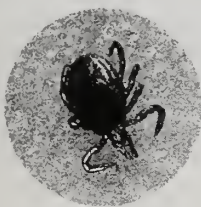


Fig. 1: Deer Tick

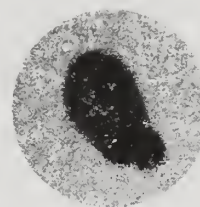


Fig. 2: Melanoma

Melanoma is the deadliest form of skin cancer. In fact, one person an hour in the U.S. dies from the disease. Fortunately melanoma can be completely cured if it's caught early enough. So examine your skin regularly. If you find a blemish larger than a pencil eraser, multi-colored, asymmetrical or irregular at the edges, you may have melanoma and should see your dermatologist. For more information on melanoma, call 1-888-462-DERM, or visit www.aad.org.



AMERICAN ACADEMY OF DERMATOLOGY

Natural Rubber Latex

A short history of its production, use and sensitizing features in the development of latex allergy in adults and children

John T. McDonnell MD

The naturally occurring substance, latex, is a milky white substance which, when the bark is cut, drips from the Brazilian rubber tree, *Hevea brasiliensis*, which is in the family, *Euphorbiaceae*. Recently, the guayule bush, *Parthenium argentatum*, has been a minor source of latex. (ref.¹) Latex is also produced by the cells of various seed plants (as of the milkweed, spurge, and poppy families) but these have not been used commercially to any large extent.²

Historical evidence exists that South and Central American Indians used latex to make waterproof shoes and bouncing balls. European explorers brought this compound back to Europe. In 1790, Joseph Priestly, the British Chemist best remembered as one of the discoverers of the element, Oxygen, coined the term, "rubber," when he first noticed that this compound "rubbed" out pencil marks. The milky rubber tree sap, usually a white fluid, is crude latex. After harvesting, it is filtered to remove particulate debris; then it is preserved by adding either ammonia or sodium sulfite.

Rubber made from latex is called "Natural Rubber Latex" or "NRL". Depending on how the latex is manufactured, two kinds of Natural Rubber Latex (NRL) can be produced. Latex can be coagulated by the addition of acetic or formic acid to make crepe rubber which is used in hard products such as tires, rubber balls, and crepe rubber shoes. Liquid latex can also be processed by vulcanization to make thin, stretchy products such as rubber bands, balloons, condoms, rubber adhesive, and surgical gloves. Vulcanization is the process of heating latex with accelerators to speed up the procedure, anti-oxidants to make the product heat and chemical stable, and sulfur containing products to induce cross-linking between isoprene chains to produce a three-dimensional lattice. Compounds commonly used in the processing of latex include thiurams, dithiocarbamates, tetramethylthiuram monosulfide (TMTM), mercaptobenzothiazole (MBT), and isophenylamine.

Natural Rubber Latex is very popular because of its strength, flexibility, tear resistance, elasticity, and impermeability to bacteria and viruses. Thousands of common household items contain NRL, from shoes to pacifiers to rubber pants to kitchen cooking and storage materials.

Latex allergy is the result of the exposure of susceptible individuals to latex rubber proteins. The vast majority of latex sensitive people are only allergic to products made from liquid latex. Estimations of latex allergy range from 10-17% of all health care workers in the United States today.¹ The allergic response in these situations can be mediated by either Type I (IgE-mediated, i.e. Allergic Rhinitis, Urticaria, Asthma or Anaphylaxis) or Type IV (Cell-mediated, delayed hypersensitivity) mechanisms of the Gell and Coombs classification of allergic responses.

In Contact Dermatitis situations, the response can be merely irritant reactions to the occlusive physical properties of the mere act of wearing a glove, which is not an allergic reaction at all. Alternatively, the reaction can be cell-mediated atopic eczema, an allergic response not only to the latex itself, but also to contaminants in the production process of the latex.^{3,4} As demand for more gloves increased geometrically after the Center for Disease Control issued its recommendation for universal precautions in 1987,⁵ a rush to meet demand led to latex processing plants moving closer to latex harvesting sites, giving rise to fresher and possibly more potent antigens.⁶ Other contaminants, including endotoxins, lipopolysaccharides unique to the outermost wall of Gram Negative Bacteria, have risen in their content in latex gloves, particularly the less expensive, non-sterile gloves, and these, too, have been implicated in the allergic response in latex-allergic patients.⁷ These endotoxins were found mostly in the inside of gloves and were released as very small respirable particles that were not physically associated with the powder.

Type I, IgE-mediated allergic responses to airborne particulate latex particles are potentially far more severe reactions. Exposure is usually by inhalation of allergen carried by cornstarch powder with which most powdered gloves are coated to facilitate donning and removal.⁸ The clinical manifestations of Type I, IgE-mediated latex allergy range from mild urticaria to fatal anaphylaxis.

Health care workers, patients with genitourinary tract anomalies requiring daily bladder catheterization, atopic patients, and patients with tropical fruit (avocado, banana, and chestnut) allergy have had life-threatening anaphylactic reactions.^{9,10} Sensitive individuals may experience wheezing or flushing angioedema caused by contact of mucous membranes with latex products, such as with condoms, or dermatitis caused by household latex products, which may

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progress to anaphylaxis. Thus the clinical history is essential, and questions regarding latex hypersensitivity should be asked of all patients preparing to undergo surgery, hospital procedures or internal pelvic exams because these procedures may produce life-threatening allergic reactions.¹¹


Occupational latex allergy in health care workers occurs almost exclusively as a result of exposure to latex rubber gloves.¹² Asthma caused by occupational exposure may persist even after the employee leaves the workplace. According to the Joint Position Statement of the American Academy of Allergy, Asthma & Immunology and the American College of Allergy, Asthma & Immunology concerning the use of powdered and non-powdered natural rubber latex gloves, such occupationally acquired asthma may lead to persistent impairment, and, rarely, to disability.^{12,13}

Despite the majority of adult latex allergy being occupationally related in health care workers, children can and do develop sensitization to latex. Although multiple operations at an early age or urinary anomalies requiring daily catheterizations are well known risk factors for latex allergy in children, in a large study in Finland of children being evaluated for inhalant or food allergy, the prevalence of latex allergy was 1%. It is important to note that these children had already been identified as allergic individuals. The majority of children with latex allergy identified at screening or admitted because of suspicion of latex allergy belonged to the group

of children who had not undergone previous surgery.¹⁴ Balloons, followed by gloves were the most common latex products causing allergic problems.

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The Legal Aspects of the Latex Protein Allergy Epidemic

Gary O. Galiher JD and L. Richard DeRobertis JD

The epidemic of Type I allergies to latex proteins appears to be limited to healthcare workers and others who have used or been exposed to powdered latex gloves.¹ This phenomenon apparently began with the advent of universal precautions in the late 1980s and the consequent ten-fold increase in the demand for latex gloves.²

Lawsuits against the manufacturers of powdered latex gloves commenced in the 1990s. They are filed in both state courts and federal courts. Cases filed in Hawaii State Circuit Court have been designated "complex litigation" and assigned to the Hon. Gail C. Nakatani. Cases filed in federal courts have all been temporarily transferred by the Multi-District Litigation panel to Philadelphia and assigned to the Hon. Edmund Ludwig. One recent jury trial in Wisconsin resulted in a verdict of \$1,000,000.³ Documents produced by the manufacturers have been subjected to court protective orders which prohibit even alluding to their contents. Yet, published articles on this topic contend that the manufacturers shortened or eliminated the post-oven leaching time of their latex gloves and thus produced gloves with high extractable protein content.⁴ Some members of the industry appear to concede that changes in the manufacturing process, such as the shift from alcohol coagulants to water and decreasing the use of zinc-bearing components may be one of the factors in the increase in Type I reactions to latex.⁵ Leaching has long been described in the manufacture of "rubber gloves" as "probably reduc[ing] the risk of dermatitis to the wearer."⁶

Persons with Type I allergies have at least two parallel legal recourses: (1) filing worker's compensation claims for occupational disease (which provided limited benefits) and (2) filing product liability actions against latex glove manufacturers (which provide full compensation for losses). Occupational diseases, including disabling allergies, have long been compensable under state workers' compensation laws.⁷ A causal connection between work and the disease is sufficient. Product liability is more complex. Under Hawaii law, a manufacturer is liable to end-users for personal injury and disease caused by its defective products. A product is defective if rendered dangerous by a flaw in the manufacturing process, or it is defectively designed, or if the manufacturer fails to warn of dangers in the expected uses of the product by the public.⁸ A product is deemed defectively designed if (i) it is not as safe as an ordinary consumer or user would expect when used in a reasonably foresee-

able manner; or (ii) the benefits of the product as designed are outweighed by the dangers imposed by the product.⁹

To the extent that latex glove manufacturers decreased the total leach time to below the industry standard and this resulted in a higher level of latex proteins in the finished product, this would establish liability under both the manufacturing defect (i.e., flaw in the manufacturing process) and the balancing test for defectively designed products. That is, a product designed to have more latex proteins in the finished product than is otherwise necessary produces no added benefit to the end-user compared to the protective benefits already present in a properly leached latex glove.

A parallel theory of liability of the latex glove manufacturers is their failure to warn. Under well-established Hawaii law, a manufacturer is negligent if it fails to warn of the reasonably foreseeable dangers in its products.¹⁰ It is established in the published literature that the latex glove industry knew since the 1930's that certain individuals can become sensitized to the naturally occurring proteins in latex gloves.¹¹ Therefore, the manufacturers had both a duty to eliminate the dangerous levels of latex proteins from the finished product and to warn end-users of the risks inherent in high protein powdered latex gloves. Failure to warn liability can also be established if the warnings were inadequate or misleading.¹² Thus, latex glove manufacturers which promoted their products as "hypoallergenic" when in fact they had high levels of protein allergens could be found negligent and consequently liable for sensitizing healthcare workers who develop Type I systemic allergies. Numerous documents in the public domain indicate that the latex manufacturers, through the trade association, Health Industry Manufacturers Association, actively resisted discontinuing the claims of "hypoallergenic" for latex gloves. On June 24, 1996, the FDA proposed that the term "hypoallergenic" be eliminated because it is false and misleading in that it incorrectly implies that the product labelled as "hypoallergenic" may be used safely by latex sensitive persons.¹³

It is vital for anyone with a Type I allergy to understand that their claims against the manufacturers and for worker's compensation benefits are subject to statutes of limitations. That is, a claim for being exposed and sensitized to latex proteins through powdered gloves will be barred if a legal action is not promptly filed. The exact knowledge which triggers the running of the statute of limitations is a technical legal issue and depends upon the particular facts of each individual case. Indeed, the elements triggering the running of the statute of limitations have been the subject of numerous appellate court opinions.¹⁴ No healthcare worker should assume his/her claim is already barred; nor should he/she assume that it is safe to delay seeking legal advice.

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continued on page 167

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Continued from p.150

select an eligible panel chairperson that is agreeable to all parties. Once the parties agree, then they submit their written request to the Director of the Department of Commerce and Consumer Affairs.

In most cases, the Panel chairperson requested by the parties will be appointed by the Director; however it is made clear to the parties that their request to the Director is a request and that the appointment of the chairperson continues to be a function of the Director.

Migration of MCCP Database

At the close of the calendar year 1998, we moved the entire MCCP database to a more capable and functional database program. Although the process did take a substantial amount of effort, we are now capable of analyzing MCCP statistical data in a more comprehensive manner, and on a real-time basis.

MCCP Forms and Informational Materials

The final area of improvement in the MCCP program that occurred in 1998, was regarding the availability of MCCP information and forms.

Thanks to a project undertaken by the Information and Communication Services Division of the Department of Accounting and General Services, we were able to place MCCP forms and informational materials on the State of Hawaii web page on the World Wide Web. As a result of the forms being posted on the State's internet site, parties and interested persons, now have unlimited access to these forms and informational materials, 24 hours a day from any Internet access point anywhere in the world. The internet address for the MCCP informational materials and forms is: www.state.hi.us/forms/, and the forms are under the section for the Department of Commerce and Consumer Affairs, and the Medical Claims Conciliation Panel.

We are currently in the process of adding more MCCP forms and informational materials to the State's website, as well as making the forms available by way of automatic faxing upon request through the DCCA Consumer Dial system.

Number of Claims Filed in 1998

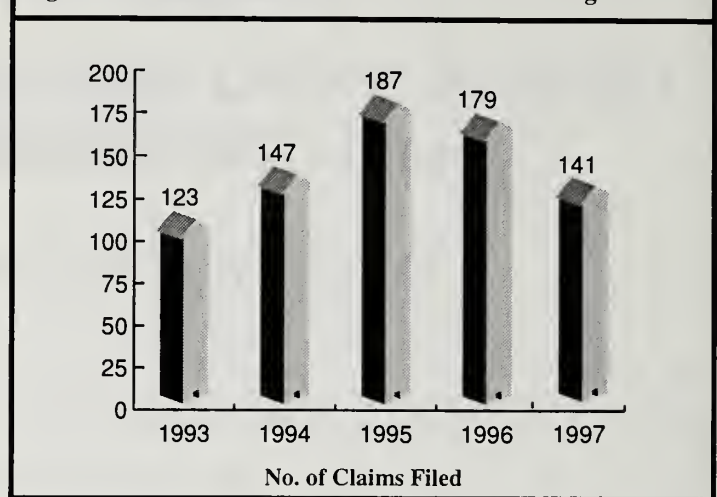
In 1998, there were 154 cases filed with the MCCP program, involving 318 claimants, and 436 respondents. It should be noted that although there were 318 different claimants, there were not 436 different health care professionals and facilities named as Respondents. However, each case requires the same individualized processing effort, even if some of the cases involve some or all of the same respondents.

In regards to parties who are unable to pay the required filing fees, in 1998, 31 individuals requested filing fee waivers, and of the 31 requests, 27 waiver requests were granted by the Director.¹

Disposition of Claims Heard in 1998

In 1998, the MCCP panels heard 130 cases that involved a total of 267 claimants and 364 respondents. Once again, it should be pointed out that although these statistics indicate that 267 different claimants were involved in the claims heard by MCCP panels, there were not 364 different health care professionals or facilities involved.

Figure 1: Number of Claims Filed in 1994 Through 1998



It is also significant that of the cases heard by the MCCP in 1998: 1) there were 28 cases in which the claimants were not represented by attorneys (*pro se* claimants); 2) of the 130 claims heard, the MCCP found only two underlying claims to be frivolous (palpably without merit); and 3) in 2 cases, claimants who did not have attorneys to represent them obtained findings of actionable negligence against some or all of the respondents involved in those cases.

In 21 of the cases where the panels found actionable negligence on the part of all or some of the respondents, the panels rendered advisory determinations of damages ranging from \$10,000.00 to \$3,000,000.00.

The following table provides a statistical overview of the disposition of cases heard by MCCP panels in 1998.

Figure 2: Disposition of Claims Heard in 1998

Total number of parties in cases heard:	631
Total number of Claimants	267
Total number of Respondents	364
Total number of hearings conducted:	130
Actionable negligence found:	11
Some Respondents negligent:	10
No negligence found:	105
Dismissed at hearing:	3
Settled or withdrawn at hearing:	1
Total Damages Recommended by Panels:²	\$11,020,000.00

¹ The requests to waive the filings were denied because the claimants had the financial ability to pay the required filing fees. The MCCP utilizes the same financial guidelines to determine a party's eligibility to waive the MCCP filing fees, as the courts use in determining whether a party can proceed in forma pauperis in a judicial proceeding.

² In six of the cases in which the Panels found actionable negligence on the part of all of some of the respondents, the Panels were not able to make determinations of damages.

Figure 3: Comparative Disposition of Claims Heard in 1998

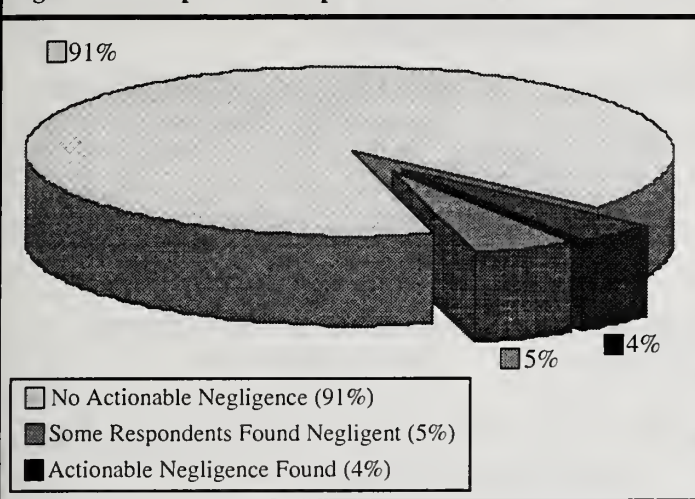


Figure 4: Disposition of Claims Closed Without Hearings

Total Claims Closed Without Hearings:	28
Total Number of Claimants:	49
Total Number of Respondents:	63
Withdrawn:	17
Settled prior to hearing:	7
Othe disposition:	4

Conclusion

We greatly appreciate the support that we have received from everyone during the past several years, while we developed systems and processes for carrying out our additional responsibilities for the MCCP program. We have listened to the concerns and suggestions of the parties and participants, and whenever possible, we have made the required modifications to the procedures involved, or incorporated the proposed solutions into the MCCP program itself.

Special thanks to Rod Maile, Senior Hearings Officer, and his staff at our Office of Administrative Hearings. Rod's commitment to continuous improvement is the driving force behind the innovation in the MCCP process.

We will continue to work with the parties and participants of the MCCP program to find new ways to allow the program to fulfill statutory and philosophical obligations.



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Life in These Parts...

Charlie Judd, So Fondly Remembered... (From Bob Krauss's, "Our Honolulu", Sept. 30, 1998)

"I am pleased to announce that Dr. Charlie Judd won't have to climb up and paint the roof of his new health center in Kalihi the way he did on the first one...It's too bad he isn't here to enjoy it."

"People of our country call him a saint," said Malaia Patu, registered nurse at Kokua Kalihi Valley Comprehensive Family Services Center. "They see him, they say, here come Jesus."

"This is one reason: It is the Samoan custom to circumcise boys when they enter school, but the \$300 that clinics charge can be too much for a poor family, especially if there are a lot of children. Kokua Kalihi Valley director Jory Watland remembers when Charlie said, 'I'll do it at the center for \$35.'"

"Other physicians said crazy. One of them called him a missionary eccentric. His wife Mary called him "Doctor No Charge."

When he died in 1987, a tribute to him from the people of Western Samoa included a ceremony at Central Union Church. Only one other foreigner — Robert Louis Stevenson — received such tributes.

Church and community leaders started Kokua Kalihi Valley in 1972 to provide services most needed in the community. One of them was medical care. The Rev. Lalomilo Kamu of the Kalihi Samoan Baptist Church recommended Charlie.

A volunteer plumber fixed up an examining room in an empty studio apartment. Charlie brought his black bag and they were in business. He shared the space with a sewing class and a public health nurse.

Then the board scraped together \$850 to buy two Army surplus personnel trailers. Charlie helped on weekends to convert them into a service center on a vacant parking lot. It filled such a need that foundations and other contributors put up money for a proper building.

Malala cooked hamburgers for the volunteer carpenters.

The center on Gulick Street provides the services useful in Kalihi: dental and medical care, behavioral counseling, perinatal education, family planning, after school programs. Charlie would see 30 patients in 3 hours after being up most of the night in surgery.

"Our budget the first year was \$33,000," said Watland. "But Charlie insisted that everyone receive the finest care. That's the imprint he left."

In 1979 Charlie became medical director when the budget expanded to permit hiring doctors. Other services have expanded, too.

"The doctors and nurses at the center could make more at other places," said Mary. "They stay because they want to."

But the center is bursting its seams — five people in what used to be one office. So Charlie's friends are chipping in for a new building in his honor, two and a half times bigger. The goal is \$5.4 million; \$3.3 million has been raised.

"It will be on School Street closer to those who need it and on a bus line," said Mary. Send donations to Kokua Kalihi Valley, 1846 Gulick Ave., Honolulu, HI 96819.

Potpourri I...

(Stitches Mar '99, Patricia Merle MD, Lantzville, B.C.)

A young Chinese woman presented to her doctor concern that she hadn't become pregnant after two years of marriage. With a waiting room full of patients, the doctor wasted no time.

"Just take off your clothes and hop on the examining table," he instructed, "and I'll be right back!"

The young woman gazed at him horrified. "No, no, doctor!" She shook her head. "You don't understand! I want a Chinese baby!"

Life in These Parts...

"For Doctors, Honesty is A Good Policy" by Beverly Creamer (medical reporter extraordinaire)

Scott Hundahl, surgical oncologist: "The delicate dance of what to tell a patient whose illness is threatening to kill them is actually a very simple one-step...Patients deserve the truth...patients will often ask real specific questions about prognosis and they deserve the best answer that you can provide. Particularly in oncology, there are sensitive ways to share the bad information. It would not be the best for a physician to tell a patient he or she has a certain number of months to live. Instead it's preferable to offer a patient the statistical odds on survivability of their particular stage of disease. Even when doctors do their best, patients sometimes aren't able to listen. Psychologically, patients tend to repress information they're not able to handle. In the world of cancer treatment, there is no real certainty. We've all seen people with extensive disease who, as the result of a new drug or a new treatment, are suddenly brought back from the brink. In the early 1970's there were young men with testicular cancer throughout their bodies, and there wasn't much that could be done. Then came Cisplatin and suddenly even the patients with extensive disease were being cured. And now testicular cancer, even in the disseminated stage is curable about 70 percent of the time."

"Childhood cancers have a higher cure rate than adult cancers simply because over the last two or more decades parents have been willing to try anything to save their children's lives. And that meant willingness to put their children in clinical trials testing new drugs. Most children with cancer are now being cured... That's one of the real triumphs of oncology."

Kenneth Kipnis, medical ethicist and UH professor of philosophy: "It can be put gently by saying something like 50% of the patients like you will live for this amount of time, 25% will die sooner and 25% will live longer...The first mistake is giving anyone a deadline for his life. That's not medically accurate and patients sometimes are

very angry at physicians who give them a deadline.

The second mistake is to say 'I don't know.' Again that's not true. Physicians are familiar with the course of a disease and do have fairly good judgment in this area."

Willow Morton, VP of Kapiolani Medical Center and former chairman of its bioethics committee: affirms the need for honesty. "When the patient is terminally ill and treatment is palliative rather than curative, knowledge can give the patient and family time to handle the issues they need to before death. They can make their good-byes, resolve old hurts, say all the things they have always wanted to say."

Potpourri II...

A doctor, a dentist and an attorney were in a boat together when a wave came along and washed them overboard. Unable to get back into the boat, they decided two would hold on and the third would swim to shore for help. The doctor volunteered.

The dentist said, "There are hundreds of sharks between here and the land. You'll get killed."

Without further discussion, the attorney took off. As he swam toward the shore, the sharks moved aside. The dentist said, "That's a miracle!"

The doctor said, "That's professional courtesy!"

A wall between Heaven and Hell fell down. St. Peter called over to the Devil, "Send over an engineer to get this wall back up."

Satan answered, "My men don't have time for that."

"If you don't, I'll sue you."

Satan asked, "Where are you going to get a lawyer?"

Life in These Parts...

"It's all About Balance" (Excerpts from a MidWeek Cover story by Mark Doyle, May 20 '98, interviewed in Honolulu Club Restaurant)

"For a guy who might be the next national light weight body building champ, Dr. Peter Fong talks and acts more like a priest or philosopher than a world class fitness fanatic" (In 1997, Peter placed 4th in the US National Body Building Championships in Dallas and also won the "Most Improved Award") "This is a quiet, reflective guy who orders fried calamari and moves as easily in conversation from physical anatomy and medical science to philosophy."

"When Fong, 38, talks about training his body, it is inseparable from how it affects his mind and his spirit as well."

Peter Fong is a board certified anesthesiologist at Kaiser permanente who gets up at 4 am five days a weeks to train, starting with a cardio session and then moving to intense weight training before going to work. In the afternoon, he does a second cardio session. These are the light days. Sixteen weeks before a competition, the schedule is even more intense, seven days a week instead of five.

Fong says, "I've always enjoyed challenges. I like to live life to the fullest and take it as far as I can. I kind of view it as an adventure."

"It's the day-in, day-out performance in the operating room that helps him achieve the most important thing in his life — balance."

"Fong says his body building and medicine give him the opportunity to strike a balance...It's a matter of understanding yourself, and continuing to improve yourself — on all levels — intellectual, physical and spiritual."

"To do what I want to do requires a great deal of focus. And to maintain that focus, I have to have that balance. It's what life is all about."

Potpourri III...

"20 Things you Don't Want to Hear During Surgery" (Contributed by our editor Norman Goldstein, who got the list from a Richard Clark MD, who in turn got it from a Jerry Levy MD; Jerry got it off the Web and has no idea of the source)

1. Better save that. We'll need it for the autopsy.
2. Someone call the janitor - we're going to need a mop.
3. Wait a minute, if this is his spleen, then what's that?
4. Hand me that...uh...that uh...thingie.
5. Oh my! Hey, has anyone ever survived 500ml of this stuff?
6. Rats, there goes the light again...
7. Ya, know, there's big money in kidneys. Heck, the guy's got two of 'em.
8. Everyone stand back! I lost my contact lens.
9. Could you stop that thing from beating? It's throwing my concentration off.
10. What's this doing here?
11. That's cool. Now can you make that leg twitch?
12. I wish I hadn't forgotten my glasses.
13. Well, folks, this will be an experiment for all of us.
14. Anyone see where I left the scalpel?
15. OK, now take a picture from this angle. This is truly a freak of nature.
16. Nurse, did this patient sign the organ donor card?
17. Don't worry. I think it's sharp enough.
18. She's gonna blow. Everyone take cover!!!
19. Rats.! Page 47 of the manual is missing!
20. Anything that follows the word "oops".

Medical Tid Bits I...

In February, the National Cancer Institute recommended (for the 4th time in 10 years) that moderately advanced cervical cancer be treated with chemo and radiation rather than radiation alone. Five studies involving 1,500 women with cervical cancer treated simultaneously with chemo and radiation showed a reduced risk of dying by 30 to 50%. All five studies had best results with a platinum based drug like cisplatin. (Time 3/8/99)

The FDA has okayed an all natural progesterone derived from Mexican yams for use with estrogen in hormone replacement therapy. Called Prometrium, it is identical with the progesterone in a woman's body and raises HDL more effectively than synthetic progesterones. (Time 1/11/99)

Researchers think casual drinking is a big cause of absenteeism, tardiness and poor productivity. Some 23% of managers sometimes have a drink during the work day and 25% of workers occasionally come in with hangovers. (NEJM)

Watch your water softener if you have HTN or kidney disease. A recent study suggests that potassium based softeners may lead to dangerously high build-up of K.... (Time: 12/21/98)

A study of 2,647 patients treated for mild to moderate heart failure with beta-blockers lowered their risk of death by 34% over a 15 month period. Beta-blockers counter the body's "fight or flight reaction" to stress (ie the beta adrenergic receptors in muscle which respond to surges of adrenalin).

Milton Packer, professor of medicine at Columbia Presbyterian Medical Center reports that "fewer than 5% of congestive heart failure patients are on beta-blockers. If we can get 75 to 90% of these patients on beta-blockers, we'd be saving tens of thousands of lives." (Lancet, 1/2/99)

Conference Notes...

"Screening for Thyroid Disease", QMC 5/7/99, VP Peter Singer, Prof of Medicine, Chief Endocrinology USC

A. Introduction: Prevalence of Thyroid disease in US:

a. Hyperthyroidism:	0.5%
b. Nodular Goiter:	5%
c. Hypothyroidism: Age 40	1-2%
	50 3%
	60 5-7%
	70 10-12%
	80+ 15-20%

Hypothyroidism: sustained ↑ TSH.

- a. Chronic: Hashimoto's
 - b. Subclinical: Free T₄ = Normal
 - c. ↑ T₄ age. (Grave's ↓ T₄ age)
 - d. Sy's: apathy, depression, lack of interest
- **Be aware of the prevalence of hypothyroidism...Early screening can prevent morbidity...**

B. Case Presentation: (68 yr. woman with elevated cholesterol)

T.C. = 278

Sys: Fatigue, vague chest pain, loss of appetite with 10 lb wtg loss, depression

Exam: P = 68, BP 150/96, Placid appearance; uninterested in surroundings

Lab: Hb±low; TC = 278, LDL = 161

Dx: a. Hyperlipidemia, b. Depression,

c. RO Heart Disease

Cardiologist: EKG = Abnormal; bradycardia, non-specific ST: low voltage...

Stress ECHO: normal

Dx: a. Hyperlipidemia, b. Depression

Rx: Low fat diet; psychiatric referral

Psychiatrist: Lab: TSH = 19.2 (0.4 - 4)

Free T₄ = 5.2 (5 - 12)

Dx: Mild Thyroid Failure

Rx: L-T₄ 0.05 microgram po/d

3 mos later: Appetite ↑, pt happy

Lab: TSH = 1.2, TC = 231mg%, LDL: 138

(Some patients lose wtg, but this pt gained wtg)

C. Reasons for Screening for Thyroid Disease:

- a. Relatively prevalent
- b. Adverse clinical consequences preventable
- c. Clinical dx unreliable
- d. Treatable

D. Prevalence: Thyroid Deficiency in Framingham Cohort:

13.5% women over 60 = hypothyroid (TSH >5)

10% men over 60 = hypothyroid

Hypothyroid Screening Survey:

New dx: 5.4%

Previous dx \bar{c} adequate Rx: 7.5%

Previous dx \bar{c} inadequate Rx: 4.3%

Total hypothyroid cases in women over 40 = 17.2%

*** ↑ LDL-C c hypothyroidism

Draw TSH in hypercholesteremia

E. Clinical Symptoms a/c hypothyroidism:

- | | |
|---------------------|-------------------------|
| • Fatigue | • Wtg gain |
| • Lethargy | • Loss of appetite |
| • Sleepiness | • Constipation |
| • Mental impairment | • Menstrual Disturbance |
| • Cold intolerance | • Arthralgia |
| • Hoarseness | • Paresthesias |
| • Dry Skin | • Loss of Memory |
| • Less perspiration | |

***Hypothyroidism increases with age...

Do TSH at age 35 and q 5 years...

G. Treatment:

Treat overt hypothyroidism

Goal: Normalize TSH

Start healthy pt < 50 yrs old \bar{c} 1.6microgram/kg/d

Healthy pt > 50 yrs: 50 microgram/d

Coronary patient with hypothyroidism: treat coronary disease first.

H. Metabolic consequences of Hypothyroidism:

- | | |
|---------------|-------------------|
| • Cardiac | • Hepatic |
| • Respiratory | • Renal |
| • GI | • Lipid |
| • Neurologic | • Drug metabolism |
| • Hematologic | |

Medical Tid Bits II...

A panel of 150 experts recommended last January that CHF patients should be on digitalis, diuretics, ACE's and Beta Blockers (Presently under prescribed) (Time 2/1/99)

When non-smokers suffer from emphysema, chronic bronchitis or asthma, their lung cancer risk rises to 94% — which may be genetic or due to chronic inflammation. (Time 2/1/99)

A study of 89,000 women found that high fiber diets (fruits, vegetables, and grain) makes no difference in incidence of colon cancer... (NEJM Jan '99)

The diet pill Orlistat which awaits FDA approval, is being sold in Europe. Obese dieters lost 19 lbs in the first year compared to 13 lbs on placebo. Side effects include cramps and fecal incontinence. (Time 2/1/99)

(Ed: Orlistat was approved by FDA in April and is marketed as Xenical...)

Scientists report that half of all cases of dog and cat bites carry pasteurilla which can cause septicemia, bursitis and even meningitis. (JAMA & NEJM)

A recent study says calcium supplements (1,200mg/d) reduce the growth of colon adenomas. Researchers theorize that calcium binds with compounds that irritate the colon lining. (Time 1/25/99)

Mayo Clinic reports that 639 women with moderate to high risk of developing breast cancer underwent prophylactic mastectomies from 1960 to 1993, thus reducing their risk of dying from breast cancer by 90% (a figure which is debatable). Researchers have identified two major genes BRAC 1 and BRAC 2 whose mutations increase breast and ovarian cancers. Tests for these genetic mutations cost \$2,400 for the first test per family and \$400 for subsequent tests... (Time 1/25/99)

Medical Tid Bits III...

FDA has approved a hand-held imaging device called T Scan 2000 which sends tiny jolts of electricity into mammogram detected breast tumors. Malignant cells apparently conduct electricity differently from normal cells. The scan may prevent 200,000 unnecessary biopsies per year.

Root Canal specialists say that when a tooth gets knocked out, put it in a glass of milk. Milk keeps the tooth alive by nourishing the root cells for at least an hour.

The Wall Street Journal reports 10 deaths and 11 cases of GI hemorrhage attributed to Celebrax. Monsanto says there is no proof that the drug caused the deaths. Since January, 2.5 million prescriptions have been written for the drug. (Time 5/3/99)

Eating an egg a day won't keep the doctor away, but probably won't hurt your heart either or cause a stroke per JAMA. Researchers from Harvard and Brigham and Woman's Hospital in Boston studied egg consumption by 120,000 nurses and other healthy professionals with normal cholesterol levels and found no link between eggs and heart disease or stroke (except in diabetics)

Dietary fat may be unhealthy for the heart, but will not cause breast cancer according to a study involving 90,000 women.

Viagra may not work for women according to preliminary data. Thirty post menopausal women took the drug and only 21% reported improved sexual function viz enhanced desire and easily achieved orgasms... (Time 3/22/99)

Continued from page 158

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– Patient Care Conference –
Herbal Psychotropics
Enrico G. Camara, MD, FAPM

May 4, 1999 4:30 – 5:30 p.m.
Doctors Dining Room

LEARNING OBJECTIVES

At the conclusion, participants should be able to:

- Understand the basic biochemistry of valerian, kava, and St. John's wort as it relates to their psychoactive properties.
- Identify those patients for whom these agents may have a therapeutic role in clinical management.
- Describe risks, side effects and possible interactions with each other and with prescription drugs.

– Ophthalmology Conference –
Unusual Retinal Vein Occlusions
Sherman Valero, MD

May 20, 1999 5:00 – 6:00 p.m.
Queen's Medical Center Imaging Classroom

LEARNING OBJECTIVES

At the conclusion, participants should be able to:

- Describe branch and central vein occlusions.
- Evaluate and measure unusual causes for these disease processes.
- Manage vein occlusions medically and surgically.

– Friday Noon Conference –
**Latex Allergy As It Affects
Health Care Providers**
Carl W. Lehman, MD

May 21, 1999 12:30 – 1:30 p.m.
Doctors Dining Room

LEARNING OBJECTIVES

At the conclusion, participants should be able to:

- Describe the epidemic increase of natural rubber latex allergy during the past 12 years and how to reverse the trend.
- Manage a hospital to be safe for personnel and patients with latex allergy.
- Recognize the seriousness of natural rubber latex allergy to personnel and patients.

– Patient Care Conference –
An Update on Medicine in Hawaii
*Jared Acoba; Rudy de Alday, MD; Dan Canete, MD;
Fort Elizaga, MD; Reuben Guerrero, MD; Keith Kamita;
Robert Pang, & Vince Wong*

May 29-30, 1999 1:30 – 5:00 p.m.
Turtle Bay Hilton

LEARNING OBJECTIVES

At the conclusion, participants should be able to:

- Understand practice guidelines for routine health maintenance screening.
- Summarize the regulatory issues surrounding the proper and legitimate prescribing of opioids for the management of pain.
- Recognize the role of cosmetic pharmaceuticals in improving the appearance of aging skin.
- Review the clinical uses or indications of low molecular weight heparin.

Please call Fran Smith at 522-4471 for more information.



Our Legislators Don't Know the Meaning of the Word Fear – But Then, There are Many Words They Don't Know the Meaning of.

Laser pointers and hazardous toys have been given priority attention with warnings from the American Academy of Ophthalmology, raising the issue to national prominence. But none of that approaches the hazards to people in Hawaii with our unlimited fireworks holidays. There can be no doubt that the year 2000 will be greeted with a display of noise, fire, rockets and sulfurous fumes such as never before seen here. While the Legislature dawdles and diddles with temporizing measures, and postures about religious practices, it is apparent that there will be no change in the law unless Washington Place is ignited by a stray rocket. It's a cruel world out there.

Charity was Once a Virtue; Now It's an Industry.

Historically, for all of Y1.9K (this century in current jargon) many hospitals have enjoyed nonprofit status and have been exempt from taxes on property, income and gifts. In the current climate, questions are arising about how much and how deserved such tax advantages are. In 1995 alone, the aggregate value of exemptions (reserves) to nonprofit hospitals was \$4.5 billion in income taxes and \$1.7 billion in property taxes. In order to show that the tax advantage is appropriate and properly administered they should demonstrate that they are turning any surplus funds back into community actions that are not profitable, such as teaching or charity programs.

1200 Drop in Membership in 1999 - What's Ahead, Jack?

While we fuss and struggle to trim expenses in order to keep the HMA budget intact, consider the troubles of the California Medical Association. Jack Lewin, M.D., CMA CEO (we all remember him) is trying to make up for the loss of 1200 members this past year. Efforts were made to reduce the CMA House of Delegates which number 439 (slightly more than the AMA House!) by about one-third, and reduce the board of trustees from 45 to 23 (the AMA makes do with 16). Both measures were resoundingly defeated at the meeting of the House of Delegates. Nothing is so painful as change when it doesn't happen.

In Law, Nothing is Certain but the Expense.

In California, the MICRA law, passed in 1975, which limits jury awards for pain and suffering to \$250,000, has long been the gold standard for those seeking reform in medical liability. Without doubt the statute has been a great success in limiting the cost of malpractice insurance in California. Previous attempts to dump MICRA have failed, but now the law is under determined attack from trial attorneys and some health care leaders. Trial attorneys claim the Legislature and the governor are much more sympathetic to some change in the law. At least, they say, the cap should be expanded to reflect inflation, and are looking for \$800,000 with built-in regular adjustments. And if MICRA falls in California, can our Hawaii law be far behind?

You Can Fool Some of the People ----

Merck makes two compounds with the same active ingredient, Finasteride. Proscar is a 5 mg. dose for prostatic hypertrophy, while Propecia is 1 mg. for baldness. The two tablets are similarly priced although Proscar has 5 times the effective dose. Also, Proscar is covered by health insurance plans, but Propecia is considered to be used for a cosmetic condition, and not covered. Now, baldness patients are getting prescriptions for Proscar and cutting the tablet into four or five pieces with a razor blade or a plastic pill splitter. Insurers are calling it insurance fraud. Merck claims that Propecia is priced fairly, and strongly opposed Proscar misuse. The underlying reality is that pharmaceuticals are very expensive, and that patients feel no dishonesty in some creative dosage manipulation.

Choose your Airline and your Toilet Paper Through a Process of Elimination.

With turn around time sometimes as short as twenty minutes, airplanes are getting dirtier than ever. A decent cleaning job only occurs when the aircraft is shut down over night. Frequently as planes stay on the go during the day, they become garbage pits with newspapers, plastic cups, scattered napkins, food particles, even disposable diapers stuffed between seats or in pockets. Flight attendants collect pillows, fold blankets, and pick up magazines and papers between flights, but do not do "major cleaning." Airlines flew about 70% full last year, the highest in 20 years, and increased passenger loads means longer loading and unloading times, especially with multiple carry-ons. It all accrues to less time for cleaning. Airlines are criticized for not having clean air, but only recently have passengers begun to complain about wallowing for hours in someone else's trash. In fact, a thorough cleaning of carpets, seats, and cushion repair only occur once a month. America is very much in need of an airline with panache — clean cabins, sufficient space, fresh air, enough flight attendants, and palatable meals.

Losses of \$880 Million in Two Years

Kaiser Permanente had some bright spots in 1998, such as Hawaii, Portland, Oregon, and Washington D.C. It's a good thing they had some sunshine, because for the year Kaiser had net losses of \$434 million. This makes two consecutive terrible years for Kaiser, because 1997 produced net operating losses of \$447 million. The huge deficits were attributed to high pharmacy and hospital costs, as well as out of network services. Still, Kaiser anticipates a return to profitability by delaying capital expenditures and improving hospital operations. Kaiser has long been the poster ad for politicians citing the efficiency, quality, and cost effectiveness of HMO care, so when the yardstick bends, what then?

Just Exactly What is Diddley Squat?

We already have the washeteria expanded with a cocktail bar, and now we have the telephone soda machine. In Australia, the Telstra Corp. is combining a soda-vending machine with a pay telephone. Soft drinks can be purchased using a prepaid calling card while you punch up your stockbroker. The gimmick is still in trials, but the phone people expect the machine to appeal to younger public telephone users.

Eat What you Want - Stay Fit - Die Anyway.

Chow down, egg-lovers. A Harvard School of Public Health study published in JAMA tells us that a diet which includes eggs does not in fact engender cardiovascular disease. The report is based upon a 12 year study of 120,000 people, and found that patients who average an egg a day face no higher risk of heart attack or stroke than those people who rarely eat eggs. Researchers analyzed data according to five rates of egg consumption, ranging from less than one egg a week to more than one a day. Surprise! They found no evidence that increased ingestion was associated with higher incidence of cardiac disease or stroke. Because of cholesterol content, eggs have long been believed to cause cardiovascular disease, although no one to this time had attempted to prove that presumption. Frank Hu M.D., lead author of the study, suggests that people should pay more attention to broader aspects of their diet — avoiding saturated fats, animal fats, and hydrogenated vegetable oil while increasing fruits, vegetables, whole grains, and olive and soybean oils.

Addenda

- ❖ The average American eats 5,666 eggs in a lifetime.
- ❖ Americans consume more than 20 lbs of candy per person per year.
- ❖ In London, it is against the law to make love on a parked motorcycle. (And if it's moving?)

Aloha and keep the faith — rts ■

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Kawaiahao Church

Kawaiahao Church was built between 1836 and 1842
under the direction of Hiram Bingham.



Editorial

Norman Goldstein MD
Editor, *Hawaii Medical Journal*

This Month Unconventional Medical Systems and Management of Stage I Endometrial Adenocarcinoma

We start this issue with Frank Tabrah's exploration into the world of unconventional medicine. Frank once again proves he is a Renaissance Man, a medical researcher, historian, anthropologist, and practicing clinician as well. This is a "must read" for every physician and medical student.

Dr. Keith Terada reviews 130 of his patients treated for Stage I Adenocarcinoma of the endometrium. As one of our Peer Reviewers commented on Keith's manuscript, "it is refreshing to see an article (of this magnitude) with a single author". Keith is an extremely well-trained and very busy experienced gynecological / oncological surgeon.

Hawaii is fortunate in having Frank Tabrah and Keith Terada teaching and practicing in Hawaii.

of Governor Cayetano's Blue Ribbon Panel on Living and Dying With Dignity, on which I served.

These will:

- Require insurers to cover hospice consultations.
- Require insurers to pay for bed and board in hospice care homes.
- Allow new care homes with no more than five patients to locate in residential districts. (Believe me, they can be good neighbors. One in Kailua is vastly helped by friendly neighborhood volunteers.)

Prior to seeking hospice care, patients may be under home care with insurance subsidy for skilled nursing visits, in a rehabilitation hospital, in a skilled-care home or under private care.

Tightened federal allowances for Medicare and Medicaid have been a factor in the closing of five of 22 Hawaii home health-care programs, including those of Straub, Kapiolani and Kahuku hospitals and a Waianae program.

Competition for federal and private insurance dollars may be a consideration in late hospice referrals.

Guidance to find out what is best for any patient may be sought from the state's Executive Office on Aging (586-0100), St. Francis Hospice (595-7566), Hawaii Association for Home Care (735-2970) or Long Term Care Hawaii (593-8111) and, for legal concerns, the Elder Law program at the University of Hawaii (956-9439).

A.A. Smyser is the Star-Bulletin's contributing editor. His column runs Tuesday and Thursday.



Special Contribution

**"Legislature acted to help hospice care"
from the Honolulu Star-Bulletin's "Hawaii's World" by
A.A. "Bud" Smyser**

Over 40 years ago, Cicely Saunders, a London nurse, was so disturbed by the pain and suffering of dying patients that she studied for a medical degree to allow her to open a home to treat them more humanely. Its emphasis: comfort over curing.

In 1967 she opened St. Christopher's Hospice in London. Its success has led to some 3,000 hospices in America— including seven in Hawaii with an eighth to come.

Hospice care is a concept, not a place. It can be delivered at home as well as in an institution. Its core concept is to alleviate pain, promote mental as well as physical comfort and work for "good dying" that makes patients abandon any idea of crying out for death.

Now 80, and knighted, Dame Saunders has left active management but still visits St. Christopher's patients.

A peaceful death after coming to terms with dying still eludes some patients, she said recently, but the good work she started has helped more than a million people.

St. Francis Medical Center opened Hawaii's first hospice in 1978. Initially few doctors would refer patients. Now hundreds make referrals but many still wait too long.

Hospices come closest to their goal when they have a few months to comfort and adjust patients and families before death. The median for Hawaii referrals is just over three weeks. Some come just a day or two before death— far, far too late.

Hawaii hospices are uniformly overjoyed by this year's passage by the Legislature of House Bill 172 to carry out recommendations

Editor's Note:

Mahalo again to the Honolulu Star-Bulletin for permission to reprint the "Hawaii's World" column from the pen of contributing Editor, A.A. "Bud" Smyser. Thank you, Bud, for your continued support of Hospice in Hawaii.

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Hawaii Electricians Health Fund (UHA)

Hawaii Laborers Health & Welfare Trust Fund

Aloha Care Quest

Kaiser Quest

Kapiolani Health Hawaii Quest

Straub Care Quantum

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HMAA

Worker's Compensation





Basic Science Research at the John A Burns School of Medicine.

Martin D. Rayner, PhD
Assistant Dean for Basic Sciences
John A. Burns School of Medicine (JABSOM)
University of Hawaii

In addition to the well-earned, high profile, successes achieved by Team Yanagimachi, JABSOM contains a number of research groups who have remained steadily productive. Internet searches were conducted to identify recent publications for all faculty in the Basic Science departments, as well as other faculty who work in laboratories in the School's Biomedical Building. All publications in 1998 plus 1999 publications through mid-May were included. The results were surprising and reassuring.

The bibliography represents work published by the basic scientists over the last 16 months (while extending apologies to anyone whose recent papers were missed or not yet entered into the data base). Citations were limited arbitrarily to no more than three references per research group within this time period, so as to keep the total citations within reasonable page limits.

Almost all citations are to top flight journals. The work covers a wide range from fundamental molecular studies, through population genetics, to clinically relevant research. The 39 citations in this limited list were produced by 21 faculty, although there are additional extramurally-funded faculty who just happen not to have published within the time period of this survey.

Individual basic science faculty are identified in **bold** type and citations are presented in alphabetical order for each so-identified faculty member.

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Despite a long period in which basic research has seemed to be "on the back burner" at the John A. Burns School of Medicine, this bibliography demonstrates that quality research continues to be a primary activity for a substantial proportion of the basic science faculty. Starting with a paper which evaluates the clinical significance of laboratory tests and ending with another which introduces the now famous "green mice".

This is an impressive series of reports. However, the faculty is determined to improve on this performance by careful recruitment of additional research-active basic scientists to replace recent as well as future losses to retirements.

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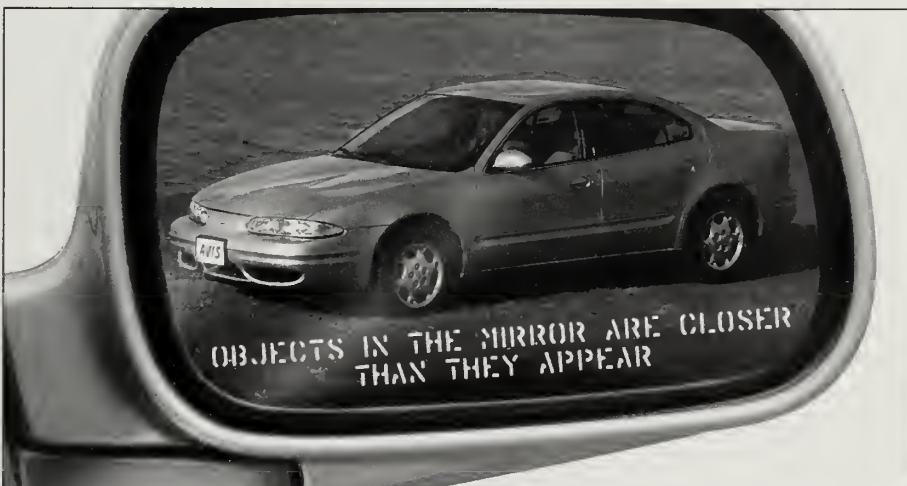
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Exploring Unconventional Medical Systems

Frank L. Tabrah MD

Abstract

Exotic medical systems still exist in the world's developing areas. These systems often embrace a unique pharmacopoeia and remarkable human relationships. Here is a guide for your personal exploration and appreciation of health care systems unfamiliar to Western medicine. It has been developed from personal use, offering practical suggestions for the study of unusual medical beliefs and practice in the field—and it can be used, closer to home, to survey disease and treatment concepts found in alternative or complementary medicine.

Exploring Unconventional Medical Systems

Renewed fascination with medical skills little known to Western medicine has sparked new interest in medical history, unusual medicinals, and the treatment arts of a myriad of peoples. The indigenous medical practices of Pacific cultures richly share this interest.

Although the content of many of the ancient pharmacopoeia—herbs, minerals, and materials from the sea have been sporadically investigated in past years, the development of new natural product screening techniques, and academic interest in alternative medicine should join forces to renew attention to the complex chemistry of plant and marine life, and unfamiliar approaches to treatment of disease. Therapeutic syntheses may well exist between natural products use, physical treatment, placebo effects, and psychosomatic interventions.¹

In considering today's possibility of new and more powerful assays of worldwide native medicinals, in islands materials, the apparent paucity of dramatic chemical effects found in past screening of indigenous Pacific island plants should be noted. Highly valuable but subtle effects may well have been missed using the classic Hippocratic screen.

Generally, physiologically active plant or animal derived agents with few exceptions such as vinca alkaloids, steroids, and antibiotics are related to highly toxic plant or animal substances produced as

defense against a hostile world of surrounding predators. How benign the native Hawaiian flora and fauna appear when compared, for example, with the vast array of South American jungle life where highly toxic plant and animal compounds abound, which in small doses may be therapeutic. Considering Hawaii's relatively non-toxic indigenous pharmacopoeia, it appears that at least some of the traditional use here of plant materials may have had strong psychosomatic effects supplementing their chemical activity.^{2,3,4}

With modern screening techniques done by automated high-throughput equipment using scores of assays based on whole cells, purified enzymes, and the activity of receptors or ion channels,^{5,6} many useful compounds may yet be found on rescreening these non-toxic indigenous plant materials. Through combinatorial chemistry ethnobotanic leads can be a shortcut to novel active compounds—as many as 40,000 in a single experiment. And certainly a full scale systematic “attack” on the chemistry of marine creatures should continue, even without known ancient clinical applications.^{7,8}

Beyond further review of Pacific islands pharmacology, there still lies the world-wide challenge of thousands of plant, insect, and animal sources of possibly useful compounds to be found. And beyond pharmacology—and to us, rational therapeutics, there is the whole range of little understood native practices of massage, incantation, song and dance therapy, meditation, and other elements that might well be included in Dr. David Eisenberg's definition of “unconventional therapies” as “commonly used interventions neither taught widely in U. S. medical schools nor generally available in U. S. hospitals.”⁹

For medical personnel, physicians, nurses, Public Health workers—anyone with a clinical background working for long periods in remote areas, the chance to survey an indigenous medical system first hand is an opportunity not to be missed. Preparation is critical. One should accumulate as much knowledge of the area and culture as possible before travel; it may help you to appreciate otherwise incomprehensible information. What you find may be unique.

With appropriate apologies to dedicated ethnobotanists and pharmacognists who are in remarkably short supply, this outline is presented as a clinician's approach to understanding the customary medical practices of any indigenous group. It is to be used simply as a means to establish closer medical contact with a host society, and in no way should it minimize the role of the professionally trained ethnobotanist in the field, whose investigations sometimes take years, and whose unusual pharmaceutical contacts can quickly facilitate natural products research, as well as insure the interest of the indigenous peoples and their informants. Several landmark publications provide rich insight into the integrated roles of medical personnel, drug development companies such as Shaman Pharma-

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ceuticals, ethnobotanists, local healers, patient populations, and their governments. Particularly well noted is the need for safeguards against cultural and economic exploitation.^{10,11,12,13}

Throughout history, fascinating unexpected drug knowledge and skills have been found by explorers, traders and travelers, linking the distant past and the geographically remote while playing their parts in early biochemistry. Sixteenth century Spanish explorers found the hunters of the Orinoco using vegetable poison on arrow heads. It was 1865 before the sources of this poison—a tropical vine—was tested in a laboratory. It contained, of course, the alkaloid curare, and years of modern use attest to its relaxation of muscles during surgery.

A classic tale of a local medical belief finding its way into modern medicine is the story of foxglove. While for hundreds of years rural savants used foxglove as a household remedy, learned physicians held it in contempt. William Withering, some two hundred years ago, as a young physician, had the wit to seek out an old Shropshire woman who had a reputation in the neighborhood for curing dropsy—her foxglove, containing our modern digitalis, was known (seemingly only to peasants) as early as the tenth century!¹⁴

What we call *rauwolfia* has been known since Vedic times as a potent medication in India. A French botanist named the plant in the early 17th century after which it was promptly forgotten. Vague rumors suggested, occasionally, its value for treating “madmen”. In 1931, 1933, and finally in 1949, attention of the Western world focused on this useful hypotensive and sedative—thousands of years from its discovery.¹⁵

One can, with insight and a modest professional approach, elicit and record medical beliefs, disease patterns, and treatment methods from people who have active local medical systems. Medical personnel with their special, usually invited, relationships with health care personnel in developing areas, are in a unique position to exchange the fundamental ideas of therapy that contribute to the excitement and satisfaction of weighing exotic clinical hints, bizarre as they may be, anecdotal, vague, but THERE—on the fragile fringe of statistical rigor.

Here is the essence of a brief therapeutic field quest. It is a basic outline of inquiry, suitable for use in remote areas by those who wish to gather information about the primary health concerns of a community, how perceived disease is managed, and whether there are any local medicinal uses of available plant, animal, or other materials, or other healing methods in use.

Although length of stay and reasons for being in a developing country may vary, the expression of genuine interest of an “outside” physician or other health professional in the local medical system is usually enough to insure cooperation from elders and informants. Proper introduction should be sought through “Western trained” health care personnel, if available, whose practices often involve native healers.

A suggestion from a medically trained person that one would much appreciate talking with a knowledgeable informant (with interpreter if needed) with whom one might discuss health related matters, generally produces a local practitioner or older family member well versed in local medical knowledge. This approach usually brings a positive response, reflecting confidence and pride in prevalent medical skills.

On the need for an interpreter, this quotation is from Bruce Briggs,

a noted anthropologist—“If you want to understand fully the ideas of sickness and health that underlie your healer’s practices, his categories of disease, and the specialist vocabulary of his profession, you must work in his language, not yours, because while you may, eventually, get to understand what he tells you in his language, and translate it into something that can be compared with western ideas on the same topic, there is no way that your informant, perfect though his English may be, can do that for you. His very use of English will mask and obscure your topic of investigation”¹⁶

To begin, expression of an interest in exchanging medical care information usually carries one beyond the awkward early points of discussion—here it is important to actually have something to share, some knowledge of the local botany or health beliefs, knowledge of a recognizable medicinal plant, local disease names—anything of common interest for the opening conversation—here your pre-travel research of an area or culture is essential.

Since it is difficult to predict where the discussion will flow, much time and interesting information may be lost without an organized approach. Discussion can be focused by simply asking some questions in language appropriate to the setting (for example, one would not ask a non-Western trained person about anesthetics or analgesics, but about things that stop pain).

Opening Questions

Since childhood disease and death are the most devastating problems in many underdeveloped areas, open the conversation by talking of these, then going on to other age groups and subjects.

1. Diseases of infants
Diseases of children
Diseases of teenagers
Diseases of adults
Diseases of old people
2. Communicable diseases (if this concept is present— and how it is thought they are transmitted).
3. Traumatic disorders (sprains, fractures, lacerations, and other surgical problems)—talk of treatments and results, wound closure and splinting, if done.
4. Poisonings:
contact
bites
stings
ingested— plant parts, or other materials
5. Most common diseases: Disease names, symptoms, how treated.
short term
long term
fatal
6. Women’s diseases and birth complications
7. Men’s diseases

8. Psychologically induced diseases (cultural equivalents of hexing beliefs, juju, ana ana, “kahuna” practices, etc.).

Clarification of points in this listing should be made in simple language. For example, in inquiring about communicable diseases, it is helpful to ask what diseases the people think they might “catch” from one another, or from animals, water supplies, etc. In Item 8 above, the psychiatric disorders in the community—a wide range of causative agents and beliefs may surface, although there is often reticence in discussing “voodoo”, hex, or other threatening psycho-suggestive practices. Although these may be denied by the informant, a useful approach is to ask that if these things were to happen, what would be the remedy.

In Fig. 1 a Nigerian infant has been painted with black circles to offset disease and misfortune- more accurately, parasitism , infection and malnutrition. With up to a 50% infant mortality rate in the first year, talks with mothers and local healers about the circles and other preventive measures provided openings for exchange of information about nutrition, bacterial disease and parasite transmission.

Early in a promising discussion it is good to get a basic idea of the range of the informant’s diagnostic knowledge and understanding of disease by producing a few blank anatomic sketches of the body, and asking for the names of body parts and the names of diseases for each part, with a brief description of their appearances or effects. From

this the names of many common diseases in the local dialect can be obtained—often a good informant has sufficient medical knowledge outside of his own system to accurately identify these diseases in more common terms. Sketches from Wagner and Rullo, Medical Guide and Glossary should be useful, Fig. 2., as well as the showing of illustrations that you may have on hand.

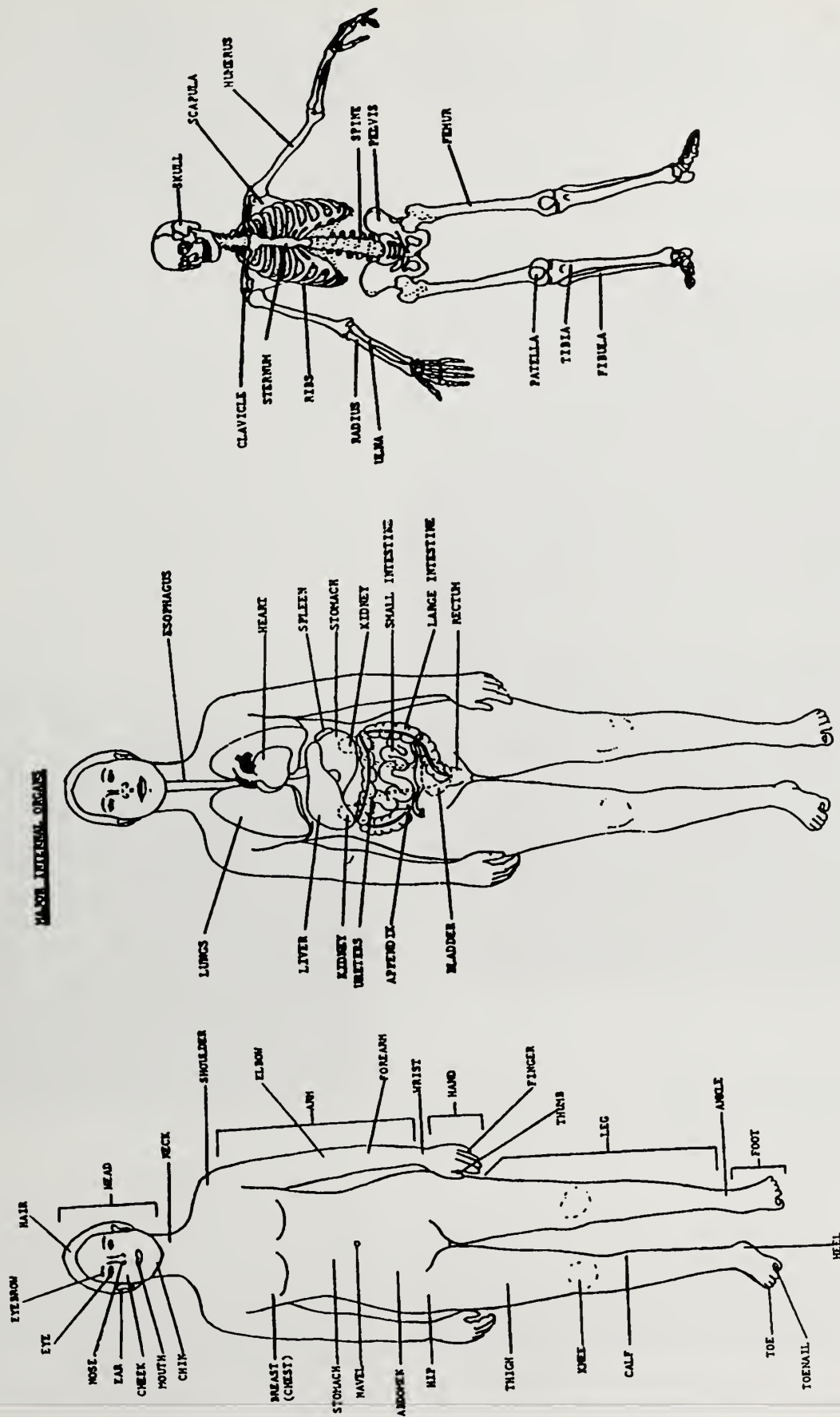
Since the exchanges with a good informant can be very intense, subjects to be covered by this outline are best considered during many interviews, allowing “thinking time” for both the informant and one’s self. Additional conversation about other matters and the chance to talk of non-medical subjects such as fishing, climate, boats, etc., usually enhances friendships and eases the exchange of medical information.

After several conversations, enhanced by interactive skill and and interest, you will probably have a fair idea of the indigenous medical scene. Think carefully about ideas inviting further inquiry. Most informants will graciously provide plant specimens for alkaloid testing in the field, or for later laboratory assay. Plant specimens can be roughly screened with one or two hundred grams of plant parts, which is about two handfuls. Thoroughly dried plant material can be safely transported or mailed for basic evaluation and a pressed reference specimen is essential.

Figure 1.— Nigerian infant with painted circles to ward off disease.



Figure 2.— Diagram for use of informants when discussing diseases and medications.



For a more focussed drug search, the following relatively simple questions will search out beliefs or facts suggesting the possible presence of several sorts of pharmacological activity. Ask what local medicines might do to alleviate the disease states you have already discussed, and what works particularly well. Most informants understand groups of remedies, so try asking in very simple terms about these:

1. Fungicides- local or systemic (possible viricides)

A common body of knowledge about treatment of chronic itching or scaling skin disorders usually includes application of several plant juices, soaks, or poultices. Of course, without an exact diagnosis with fungus cultures and other more accurate data, the existence of fungicides cannot be assured, but if you find effective measures against chronic skin lesions in the tropics, some assays might be rewarding. Natural fungicides are known—one appears to exist in the protective mucus with which the centipede coats its eggs exposed in the damp earth to destructive fungi.¹⁷ King and Tempesta reported in 1994 that over half of the plants used for native antifungicides also showed strong antiviral activity *in vitro*.¹⁸

One compound from the Samoan pharmacopoeia (prostratin, 12 deoxy phorbol 13-acetate) was found at NCI to prevent HIV-1 reproduction in lymphocytic and monocytoid target cells, and fully protected human cells from lytic effects of HIV-1.¹⁹ The possibility of potent viricidal activity in native flora, although difficult to assess clinically, should not be ignored.

2. Anti-fertility agents - systemic or intravaginal

Many cultures have reputed means of reducing fertility. Egyptians (1500BC) used lactic acid- producing tampons of acacia and honey, or highly alkaline crocodile dung;²⁰ prolonged breast feeding is, of course, a common practice, and it is quite possible that gravidolytics or substances that affect ovulation, implantation, or embryonic survival may exist in native pharmacopoeia. Questions about what can be taken by mouth to prevent or terminate pregnancy often elicit remarkable replies, both cultural and pharmacologic.

3. Uterine contractants or relaxants

Substances or practices that have effects on the menstrual cycle or on the contractions of labor are often mentioned by practitioners. These merit close attention.

4. Hormones

In view of the plethora of phytoestrogens and steroid precursors in many flora, inquiry should include uses of materials believed to affect growth and development, sexual characteristics, libido, hair growth, menstruation, production or suppression of goiter, and changes in body weight.

5. Anodynes - local or systemic

Although most indigenous medical systems are not as concerned with pain relief as we in Western medicine are, questions about agents which will relieve pain, either of disease or injury, may elicit information of great pharmacological value, if followed by laboratory investigation.

6. Anesthetics - local or systemic

Worldwide, the most common anaesthetic is a large dose of alcohol, produced by fermentation (attesting to man's vast ingenuity) of an incredible array of carbohydrate-rich plant materials. Medicinal effects of plant "tinctures" or other combinations of materials with alcohol must be considered with their alcohol content in mind. (Lydia Pinkham's celebrated vegetable compound contained 73 percent ethanol, but little else pharmacologically).

7. Steroids or salicylates

Effective long term agents against pain and disability of arthritis might suggest the presence of either or both of these groups of compounds, although their effects on pain alone would likely be masked by anodynes.

8. Antibiotics - local or systemic

Reports of effective treatment for disease of bacterial origin might suggest antibacterial action. Again, it must be understood that this is a superficial screen for information, and that cultures and laboratory tests of collected material might negate much of one's most promising ethnic information. This was true of the local use of lau-kahi (*Plantago major*) for skin infections which showed no effect in culture when tested for antibacterial activity. However, each usage should be investigated, if possible- Milkweed fibers packed into an open wound dependably stimulate healing without infection, and slough in a few days with dried serum and detritus, according to an African Yoruba healer. (Fig 3.) Antibacterial activity? Possibly.

Figure 3.— Plant fibers packed into open wound- later slough of the fiber pack leaves a clean, granulating wound. (Awo Omamma, Nigeria).



9. Clotting and anticoagulating agents

Inquiry about agents that might affect bleeding in wounds should be made for identification of possible substances speeding, slowing, or stopping clotting. One Pacific Islands plant, now under study, contains an unusual anticoagulating agent, found unexpectedly in its leaves. Unexpectedly, in that the leaves were used by the Hawaiians in wounds to stop bleeding, probably a simple foreign body effect like the classical European spider web treatment for cuts.

10. Toxic agents of any sort

Since highly toxic materials are usually well known to an indigenous population, this is a very important element in this survey.

As previously mentioned, it is a fundamental principle in pharmacology that many medicinal materials in large doses are poisons, and conversely, many poisons in small doses happen to be useful medicines, the effects varying widely with dosage. Toxic plant materials in the form of chewed leaves, teas, consumed fruits or seeds, recognized poisonous animals, marine forms, insects and arthropods, should be carefully noted and screened if the basic toxicology is unknown.

11. Antitumor agents

Some basic questions to weigh the informant's comprehension or recognition of cancer is important. Unless there is some understanding of malignancy, questioning about treatment is of course, futile. More sophisticated indigenous medical knowledge often includes attempts at cancer therapy which should be at least discussed—something may be there. In 1968, *Lanice conchilega*, a local clam worm, was reported to the author as effective against cancer if cooked and eaten. Alcohol-water extracts were found to be 100% effective against Erlich ascites cell tumor in mice, but activity in the wider NIH tumor screen then in use was below the cut for further trials.²¹

12. Vermifuges

Knowledge of vermifuges, or worm medicines, is fairly common in primitive cultural medical systems, although many areas scarcely consider parasitism as a problem. Questioning here is simple—one talks of internal worms, then an inquiry of “what will bring them out” may produce one or two favorite treatments.

13. Psychodynamic compounds

Materials altering mental or neuromuscular function may be found by close questioning about medicinally induced excitement, dizziness, visions, altered sleep, speech, or gait. For example, the ubiquitous knowledge of Pacific islanders that drinking of kava (*Piper methysticum*) in sufficient doses will tranquilize and cause temporary paralysis of major muscle groups²² has led to its appearance on the shelves of the corner health food store.

Important information in more developed areas will often be found as extensive lists of recipes, or descriptions of how local plants should be gathered and prepared for medicinal use. Such material is often found in handwritten recipes in ledger books, on sheets or end pages of family Bibles in prosylatized countries, or even in typewritten form. Although written material of this sort is usually highly prized and carefully guarded, it is my experience that its owner will graciously allow one to photograph it by simply laying it on any suitable flat surface, and copying the pages with a hand held camera.

With the plan outlined above, and particularly with the good fortune of access to written material in more developed countries, you may experience a surprisingly inclusive overview of the medicinal and therapeutic activities of an area. Beyond sharing health care information, this approach can afford great intellectual pleasure and the exchanged information will almost certainly enrich both you and your informants. A revealing talk with an Igbo Medicine man (Fig 4.) about fees brought out this ancient gem:

At the height of the fever
One promises a goat—
On recovery
A chicken will suffice.

Lasting friendships and opportunities for new cross-cultural understandings will thrive on your search for cures little known to Western medicine.

Figure 4.—Igbo healer, in his treatment facility. Services include medicinals, incantations, spells, and predictions of the future.



Finally, keep in mind that your search, even if kept quite simple can be very important. Despite the long history of chemical and physiologic investigation of culturally interesting materials, plant, animal, insect, arthropod, and marine, new screening methods of incredible sensitivity and speed offer a major research opportunity for what you might find.

Remember, clinical medicine is still among the most ancient and mysterious of the arts. Although outcomes research, evidence based medicine, and the statistical luxury of double blind studies have scarcely touched most unconventional medical systems- look and listen when you can. Something may be there. But beware of the siren song of novelty- only evidence based knowledge can truly inform our art.

Good luck!

Continued on p.190

LOCID LIPOCREAM[®] Cream

(hydrocortisone butyrate 0.1%)

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Locoid Lipocream demonstrated efficacy in over 20 clinical studies worldwide involving over 1600 patients.*

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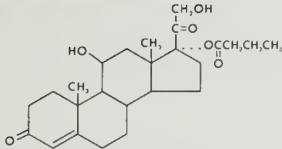
(hydrocortisone butyrate 0.1%)

For Dermatological Use Only

DESCRIPTION

LOCOID Lipocream® Cream contains the topical corticosteroid hydrocortisone butyrate, a hydrocortisone ester. It has the chemical name: (11β)-11,21-dihydroxy-17-[(1-oxobutyl)oxy]-pregn-4-ene-3,20-dione, the molecular formula: C₂₈H₄₀O₅, the molecular weight: 432.54, and the CAS registry number: 13609-67-1. The structural formula is:

LOCOID Lipocream® Cream



Each gram of LOCOID Lipocream® Cream contains 1 mg of hydrocortisone butyrate in a hydrophilic base consisting of cetostearyl alcohol, ceteth-20, mineral oil, white petrolatum, citric acid, sodium citrate, propyl paraben and butyl paraben (preservatives) and purified water.

CLINICAL PHARMACOLOGY

Topical corticosteroids share anti-inflammatory, anti-pruritic and vasoconstrictive actions. The mechanism of anti-inflammatory activity of topical corticosteroids is unclear. Various laboratory methods, including vasoconstrictor assays, are used to compare and predict potencies and/or clinical efficacies of topical corticosteroids. There is some evidence to suggest that a recognizable correlation exists between vasoconstrictor potency and therapeutic efficacy in man.

PHARMACOKINETICS

The extent of percutaneous absorption of topical corticosteroids is determined by many factors including the vehicle, the integrity of the epidermal barrier, and the use of occlusive dressings.

Topical corticosteroids can be absorbed from normal intact skin. Inflammation and/or other disease processes in the skin increase percutaneous absorption. Occlusive dressings or widespread application may increase the possibility of hypothalamic-pituitary-adrenal (HPA) axis suppression.

The vasoconstrictor assay showed that LOCOID Lipocream® Cream had a more pronounced skin blanching effect than LOCOID® Cream, suggesting greater percutaneous absorption from the former. At the present time, no adequate HPA axis suppression studies have been conducted for LOCOID Lipocream® Cream. Once absorbed through the skin, topical corticosteroids are handled through pharmacokinetic pathways similar to systemically administered corticosteroids. Corticosteroids are bound to plasma proteins in varying degrees.

Corticosteroids are metabolized primarily in the liver and are then excreted by the kidneys. Some of the topical corticosteroids and their metabolites are also excreted into the bile.

INDICATIONS AND USAGE

LOCOID Lipocream® Cream (hydrocortisone butyrate 0.1%) is indicated for the relief of the inflammatory and pruritic manifestations of corticosteroid-responsive dermatoses.

CONTRAINDICATIONS

Topical corticosteroids are contraindicated in those patients with a history of hypersensitivity to any of the components of the preparation.

PRECAUTIONS

General

Systemic absorption of topical corticosteroids has produced reversible HPA axis suppression, manifestations of Cushing's syndrome, hyperglycemia, and glucosuria in some patients. Conditions which increase the risk of systemic toxicity include the application of more potent steroids, use over large surface areas, prolonged use, and the addition of occlusive dressings. Children may absorb proportionally larger amounts of topical corticosteroids and thus be more susceptible to systemic toxicity. (See PRECAUTIONS – PEDIATRIC USE). If irritation develops, topical corticosteroids should be discontinued and appropriate therapy instituted. In the presence of dermatological infections, the use of an appropriate antifungal or antibacterial agent should be instituted. If a favorable response does not occur promptly, the corticosteroid should be discontinued until the infection has been adequately controlled.

Information for the Patient

Patients using topical corticosteroids should receive the following information and instructions:

1. This medication is to be used as directed by the physician. It is for external use only.
Avoid contact with the eyes.
2. Patients should be advised not to use this medication for any disorder other than for which it was prescribed.
3. The treated skin area should not be bandaged or otherwise covered or wrapped as to be occlusive.
4. Patients should report any signs of local adverse reactions.
5. Parents of pediatric patients should be advised not to use tight-fitting diapers or plastic pants on a child being treated in the diaper area, as these garments may constitute occlusive dressings.

Laboratory Tests

The following tests may be helpful in evaluating the HPA axis suppression:

Urinary free cortisol test
ACTH stimulation test

Carcinogenesis, Mutagenesis, and Impairment of Fertility

Long-term animal studies have not been performed to evaluate the carcinogenic potential or the effect on fertility of topical corticosteroids.

Studies to determine mutagenicity in *Salmonella typhimurium* strains TA98, TA100, and TA92 with prednisolone and hydrocortisone have revealed negative results.

Pregnancy: Teratogenic Effects:

Pregnancy Category C:

Corticosteroids are generally teratogenic in laboratory animals when administered systemically at relatively low dosage levels. Some corticosteroids have been shown to be teratogenic after dermal application in laboratory animals. In teratogenicity studies, topical administration of 1% or 10% hydrocortisone butyrate in an ointment to pregnant Wistar rats (gestational days 6-15) or New Zealand white rabbits (gestational days 6-18) resulted in no teratogenic findings. However, a dose-dependent increase in fetal resorptions was reported in rabbits, and fetal resorptions were observed in rats treated with 10% hydrocortisone butyrate.

The doses given to rats are approximately 8 to 80 times the human topical dose based on a body surface area comparison (assuming 100% absorption). For rabbits, the doses given were approximately 0.2 and 2 times the human topical dose. Increased resorptions were also noted in Wistar rats given subcutaneous administrations of hydrocortisone butyrate (9mg/kg/day; 3 times the human topical dose) on gestational days 9 through 15. In CS mice given subcutaneous administrations of 1mg/kg/day (0.2 times the human topical dose), an increased number of cervical ribs and one fetus with clubbed legs was reported. There are no adequate and well-controlled studies in pregnant women on teratogenic effects from topically applied corticosteroids. Therefore, topical corticosteroids should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus. LOCOID Lipocream® (hydrocortisone butyrate 0.1%) Cream should not be used extensively on pregnant patients, in large amounts, or for longer than two weeks.

Nursing Mothers

It is not known whether topical administration of corticosteroids could result in sufficient systemic absorption to produce detectable quantities in breast milk.

Systemically administered corticosteroids are secreted into breast milk in quantities *not* likely to have a deleterious effect on the infant. Nevertheless, caution should be exercised when topical corticosteroids are administered to a nursing woman.

Pediatric Use

Safety and effectiveness in pediatric patients have not been established.

Pediatric patients may demonstrate greater susceptibility to topical corticosteroid-induced HPA axis suppression and Cushing's syndrome than mature patients because of a larger skin surface area to body weight ratio.

HPA axis suppression, Cushing's syndrome, and intracranial hypertension have been reported in children receiving topical corticosteroids.

Manifestations of adrenal suppression in children include linear growth retardation, delayed weight gain, low plasma cortisol levels, and absence of response to ACTH stimulation. Manifestations of intracranial hypertension include bulging fontanelles, headaches, and bilateral papilledema.

Chronic corticosteroid therapy may interfere with the growth and development of children.

ADVERSE REACTIONS

The following local adverse reactions are reported infrequently with topical corticosteroids but may occur more frequently with the use of occlusive dressings. These reactions are listed in an approximate decreasing order of occurrence: burning, itching, irritation, dryness, folliculitis, hypertrichosis, acneiform eruptions, hypopigmentation, perioral dermatitis, allergic contact dermatitis, maceration of the skin, secondary infection, skin atrophy, striae and milaria.

OVERDOSAGE

Topically applied corticosteroids can be absorbed in sufficient amounts to produce systemic effects. (See PRECAUTIONS).

DOSAGE AND ADMINISTRATION

LOCOID Lipocream® (hydrocortisone butyrate 0.1%) Cream should be applied to the affected area as a thin film two or three times daily (depending on the severity of the condition) and for no longer than two weeks. If an infection develops, appropriate antimicrobial therapy should be instituted.

HOW SUPPLIED

LOCOID Lipocream® (hydrocortisone butyrate 0.1%) Cream is supplied in tubes containing:
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Current Management of Stage I Adenocarcinoma of the Endometrium

Keith Y. Terada MD

Abstract

Objective: This study was undertaken to assess the current management and outcome of patients with stage I adenocarcinoma of the endometrium.

Methods: One hundred thirty-five patients with stage I adenocarcinoma of the endometrium were treated with hysterectomy, bilateral salpingo-oophorectomy, and surgical staging. Patients were then stratified into high risk or low risk groups based on grade, depth of myometrial invasion, and the presence or absence of lymphovascular space invasion. Postoperative treatment was then individualized based on risk assessment.

Results: Sixteen of 135 patients (12%) underwent postoperative adjuvant pelvic radiation. The remaining patients were treated with observation following surgery. Actuarial survival at three years was 97%.

Conclusions: Surgical staging of endometrial cancer provides critical information with regard to the extent of cancer and prognosis. When cancer is confined to the uterine corpus, histopathologic findings can be used to assess individual patient risk; high risk patients may then be selected for postoperative radiation. Relatively few patients will require adjuvant treatment and overall survival appears excellent.

Introduction

The primary treatment for adenocarcinoma of the endometrium generally involves total hysterectomy and bilateral salpingo-oophorectomy. In 1988 the International Federation of Gynecology and Obstetrics (FIGO) modified the staging of endometrial cancer from a clinical to a surgical staging system. This clearly provides a better assessment of the extent of disease; this knowledge then allows for more individualized therapy. Patients with extrauterine disease or with identifiable risk factors may then be selected for postoperative radiation or more aggressive therapy. Unnecessary treatment may be avoided in the low risk patient.

Frequently, however, women with endometrial cancer undergo hysterectomy and salpingo-oophorectomy without the benefit of regional lymphadenectomy and surgical staging. Perioperative radiotherapy is then administered at the discretion of the individual

physician. Treatment approaches, therefore, may vary considerably, depending upon personal experience and anecdotal evidence. Utilization of adjuvant treatment may be inconsistent and result in overtreatment or undertreatment of individual patients.

The present study, therefore, was undertaken to review a series of consecutive patients with FIGO stage I adenocarcinoma of the endometrium. Patients in this series were surgically staged, then stratified into high risk and low risk groups based on histopathologic findings. Postoperative radiotherapy was then administered based on risk category. This study reports on the results of treatment.

Materials and Methods

Patients with stage I adenocarcinoma of the endometrium were identified through The Queen's Medical Center tumor registry. All patients treated by the author from July 1989 through December 1995 were identified. Patient information and pathologic findings were abstracted from patient records. 135 consecutive patients with surgical-pathologic stage I carcinoma were identified and included in the study.

All patients underwent hysterectomy and bilateral salpingo-oophorectomy, including two patients who underwent radical hysterectomy and ten who underwent laparoscopic vaginal hysterectomy. 101 patients underwent selective pelvic lymphadenectomy and 14 patients underwent selective paraaortic lymphadenectomy. There were 30 patients that had grade 1 or 2 tumors grossly confined to the endometrium at the time of surgery that did not undergo staging lymphadenectomy. In addition there were 4 patients that did not undergo staging lymphadenectomy because of various medical or technical contraindications. No patients received preoperative radiation; all patients with disease documented beyond the uterine corpus were excluded from this series.

There were 124 patients with endometrioid adenocarcinoma and 11 with papillary serous or clear cell histology. Lymph-vascular space invasion was found in 16 patients. Table 1 summarizes findings regarding substage and grade.

Table 1.— Tumor grade stratified by substage.

Grade	Substage			Total
	IA	IB	IC	
1	42	17	1	60
2	16	22	8	46
3	6	13	10	29
Total	64	52	19	135

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Patients were stratified into high risk and low risk groups based on the presence of three factors: (1) grade 3 tumor, (2) stage IC (greater than 50% myometrial invasion), and (3) the presence of lymph-vascular space invasion. Papillary and clear cell carcinoma were included in the grade 3 category. Patients with 0 or 1 risk factor present were considered low risk; patients with 2 or 3 risk factors present were considered high risk. Life table analysis was used to calculate survival and chi-square was used as a test of statistical significance. Postoperative radiotherapy was administered according to histopathologic findings and risk category. Radiotherapy consisted of external radiotherapy (45Gy) to the whole pelvis followed by a single intracavitary application of vaginal colpostats.

Results

There were 15 patients in the high risk category and 120 patients in the low risk category. Sixteen of 135 patients (12%) received postoperative radiation. All patients in the high risk group were referred for radiation; three patients in this group declined treatment. Four patients in the low risk group did not undergo staging lymphadenectomy and were treated with radiation; two patients with stage IB papillary serous carcinoma, and two patients with stage IB grade 3 adenocarcinoma. Actuarial survival for the entire group at three years was 97%. Survival for the low risk group was 98%, and 85% for the high risk group at three years. The difference in survival between the low risk and high risk groups was statistically significant ($p < .05$).

Ten patients developed recurrent disease. Two patients in the high risk group (13%) developed distant metastases and died of their disease. Seven patients in the low risk group (5.8%) developed local (ie. vaginal) recurrences. These were all treated with radiation. Four of these patients remain free of disease; one has been lost to follow-up; two have died of their cancer. Both patients that died of local recurrence had persistent local disease following radiation. There was one distant failure in the low risk group; this patient had one risk factor present (high grade). The two high risk patients with distant metastases presented with all three risk factors present. Of the seven with local recurrences, six had no risk factors present; one had stage IB clear cell carcinoma. Although all local recurrences occurred in the low risk group, this was not statistically significant ($p > .05$). The incidence of distant metastases, however, was significantly higher in the high risk group ($p < .05$).

In this series there were 28 patients with one risk factor present. Four did not undergo staging lymphadenectomy because of medical or technical reasons; these four were treated with postoperative radiation. The remaining 24 were surgically staged and treated with observation alone following hysterectomy. Of these 24 patients there was one local recurrence (4%) and one distant recurrence (4%).

Discussion

Carey et al.¹, in 1995 reported on a series of 384 patients with clinical stage I adenocarcinoma of the endometrium. In this series low risk patients were defined as grade 1 or 2 with less than 50% myometrial invasion. Adjuvant radiotherapy was not utilized for low risk patients and five year survival was 95%. Patients with deep myometrial invasion or high grade tumors were generally treated with postoperative radiation. Forty-one percent of patients received

adjuvant radiation; survival at three years for the high risk group was 81% and overall survival for the entire series was 92%. In the present series 12% of patients received radiation and overall survival at three years was 97%. This series utilizes surgical staging and therefore a different classification scheme. The presence of high grade, deep myometrial invasion, and/or lymph-vascular space invasion were used to stratify patients: patients with 0 or 1 risk factor present were low risk, and patients with 2 or 3 risk factors were high risk. This scheme assigns select 'high' risk patients with negative lymph nodes into the low risk category: stage IC grade 1,2 cancer, stage IA or B grade 3 cancer, and patients with stage IB grade 1 or 2 cancer with lymph-vascular space invasion. With surgical staging and negative regional nodes, the recurrence risk in this group appears low. There were 24 of these patients who did not receive postoperative radiation; there was one local recurrence and one distant recurrence. Of the 91 patients with no risk factors present there were six local recurrences (5%) and no distant recurrences. Three year survival for entire low risk group was 98%.

Kadar et. al.² reported similar findings in 262 patients who were similarly stratified by grade, depth of myometrial invasion, lymph-vascular invasion, and cervical stromal invasion. Of 220 patients with 0 or 1 risk factor present, 27% underwent postoperative radiation and 5 year survival was 97%.

There is some question as to whether low risk patients benefit from postoperative vaginal brachytherapy to prevent local recurrence. Piver et. al.³ reported no local recurrences in 90 low risk women treated with hysterectomy and postoperative vaginal brachytherapy. Kucera⁴ reported a local recurrence rate of 0.8% in a similarly treated group. In Carey's series the incidence of local recurrence in low risk patients treated with surgery alone was 2.6% with an associated mortality of 1.3%. Elliott et. al⁵ reported a 4.9% incidence of local recurrence in low risk patients treated with surgery alone. The incidence of local recurrence in the present series is similar (5.8%); with a mortality of 1.6%. It would appear, therefore, that postoperative vaginal brachytherapy in all low risk patients may reduce the risk of a fatal local recurrence by 1-2%. It is difficult to assess whether this represents a meaningful decrease in mortality. Certainly any major complications resulting from the routine use of brachytherapy would obviate any marginal improvement in survival.

Ackerman et. al.⁶ reviewed 54 patients with recurrent endometrial cancer. Eleven of 14 patients (79%) with vaginal vault recurrences confined to the vaginal mucosa were controlled with pelvic radiation at the time of relapse. Therefore in low risk patients, withholding radiation until the time of relapse appears to be a reasonable option. It bears emphasis, however, that as vaginal vault recurrences are not uncommon and have a reasonable likelihood of salvage, these patients should be monitored quite closely in the postoperative period.

The postoperative management of high risk patients remains more problematic. Postoperative pelvic radiation appears to result in excellent local control, however these patients remain at significant risk for systemic failure. A number of studies^{7,8,9} have failed to demonstrate a survival benefit for high risk patients undergoing postoperative pelvic radiation. Pelvic radiation may simply alter the pattern of recurrence rather than significantly impacting survival. There is an ongoing trial sponsored by the Gynecologic Oncology

Continued from previous page

Group randomizing high risk Stage I patients to postoperative radiation versus systemic chemotherapy. The results of this trial should yield valuable information regarding the adjuvant treatment of high risk patients.

In summary, the surgical staging of endometrial cancer provides vital information with regard to the extent of cancer and ultimate prognosis. When cancer is confined to the uterine corpus histopathologic findings can be used to stratify patients into high risk and low risk groups. Postoperative therapy can then be tailored to the individual patient.

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Acknowledgement

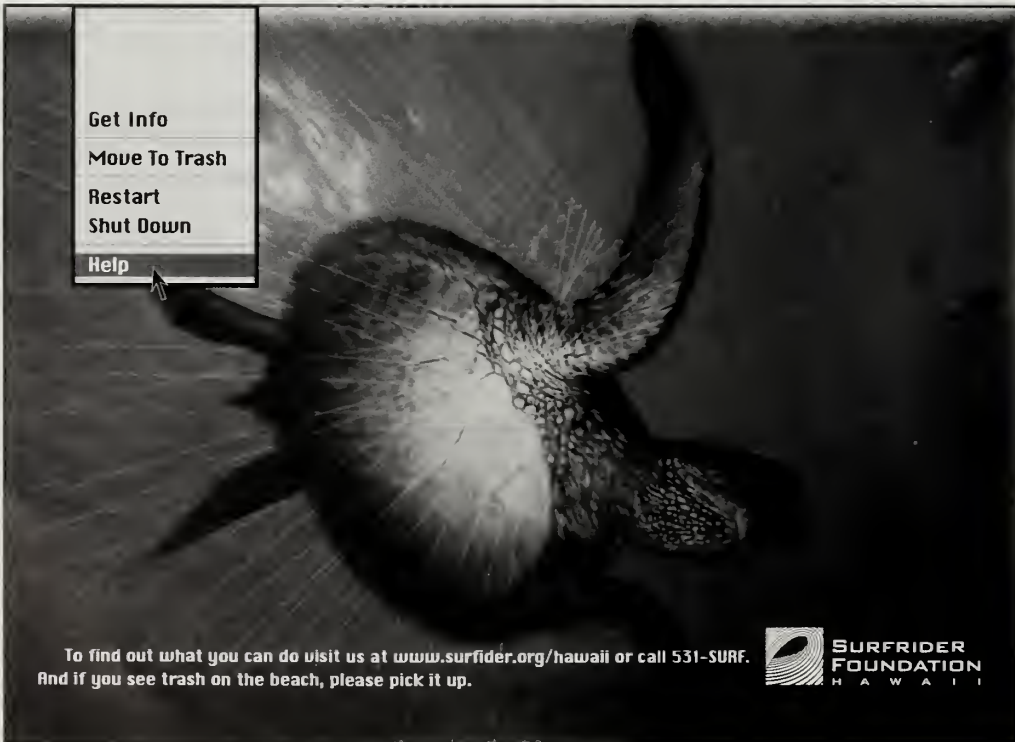
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
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Potpourri...

Two rookie cops found three hand grenades in the street and decided to take them to the police station. "What if one of them explodes?" asked the younger officer. "It doesn't matter," reassured the other, "We'll say we only found two."

Penguins mate for life. That doesn't surprise us much because they all look alike. It's not likely they're going to meet a better looking penguin someday.

A Washington DC lawyer was opening the door of his BMW when a car came along and hit it, ripping the door off its hinges.

The police arrived and found the lawyer hopping up and down with rage complaining bitterly about the damage to his precious car.

"You lawyers are so materialistic — you make me sick," a police officer commented, shaking his head in disgust. "You're so worried about your beautiful BMW that you didn't even notice that your left arm was ripped off."

"Oh, no!" said the lawyer, looking down and noticing the bloody stump where his arm had been, "Where's my Rolex?"

Laziness:

How lazy is he? Well, I have seen him step into a revolving door and wait.

Joe Claro

The Joy of Soy

(From an article by Christian Gorman Time Jun 7 '99)

Doctors are studying Soy's potential to lower cholesterol, fight breast cancer and build healthy bones...

Over 25 years, 3 dozen studies have shown that eating as little as 47 gm or 1.5 oz of soy foods/d can lower total cholesterol 9% and LDL 13% (whether isoflavones are the reason or not)

Japanese women have lower breast cancer. (Do the isoflavones act like antihormones like Tamoxifen?)

Ground rules: Boiled soybeans; TOFU (bean curd); soy milk; miso soup

FDA recommends: 25 gm of soy bean/d

Soy Facts: The Japanese consume 50 lbs of TOFU/person/year

Half the world's soy beans are grown in the US; 1/3 is exported.

95% of soybean in the US becomes cattle feed

Goodbye, Dolly (From Time Jun 7)

Since "Dolly The Sheep" was cloned 2 years ago, scientists have wondered if the infant, a genetic copy of an adult (6 yr old) sheep will live a full life or not.

The problem involves telomeres, cuff like bands at the ends of chromosomes. As animals age, the telomeres shorten, causing chromosomes to fray, cells to wink out and the organism becomes frail.

British researchers have studied the telomeres of Dolly and two other cloned sheep and found their telomeres to be shorter than those of nor-

mally conceived sheep. Another factor seems to be the time before transfer to a womb.

MEDICAL TID BITS...

Priming the Pump:

In cardiac arrest, when medics are delayed, 90 seconds of CPR prior to defibrillation increases the survival rate 25%. CPR may help by clearing away toxins released by damaged heart cells...

Preliminary data seems to indicate that an IV containing glucose, insulin and potassium given within 24 hrs of an MI and in conjunction with angioplasty and clot busting drugs cuts death rates by 66%.

Medicare Users:

In November '98, more than 400,000 Medicare beneficiaries were dropped by their HMO's. As of Dec 31, 90 HMO's (Including, AETNA, HUMANA and OXFORD) stopped serving Medicare patients in certain areas.

The patients have two options: a. Enroll in another HMO or b. Opt for "traditional" Medicare coverage, ie choose your own MD and pay certain deductibles and a 20% co-payment on other services.

Time: Apr 19 '99

MEDICAL TID BITS:

Grocery store as medicine chest:

Tofu & yams: hot flashes

Ginseng tea: more energy

Stewed tomatoes: prevent prostate cancer

Benecol & Take Control: new margerines to lower cholesterol

Benecol: Approved by FDA in May...Compound occurring naturally in pine trees... 2 tablespoons/d lowers LDL 14%

Take Control: Approved by FDA in April...extract from soybean oil...lowers LDL 10%

Time: 5/31/99

Postpartum depression is a/c high levels of cortisol in both mother and infant. A new report shows that the infant's cortisol level remains high for months even when mom's level returns to normal.

Cure for Common Cold?

An experimental remedy called **Tremacamra** sprayed into the nose 6 times a day reduced the severe symptoms of a cold without side effects. It has been tested on only one cold virus thus far...

CONFERENCE NOTES... "Management of COPD" VP Romona Doyle from Stanford QMC 5-21-99

A. Epidemiology:

COPD deaths: 83,000/yr US...5th leading cause of death

Major risk factors: cigarette smoking; Alpha I Antitrypsin deficiency.

B. Definition:

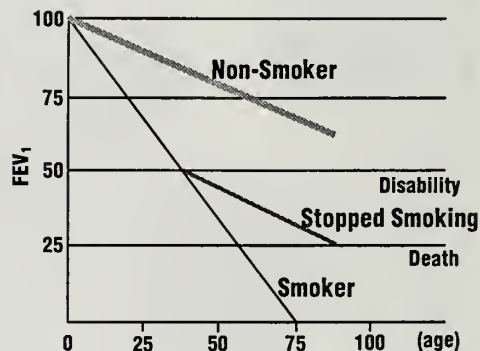
- Chronic bronchitis: clinical definition 2° symptoms
- Emphysema: pathologic definition
- Asthma

Mechanism of Airway obstruction:

- Excessive secretion
- Thickening airway wall
- Abnormalities outside airway

COPD Case:

Patient told asthma, bronchitis, emphysema...Hx: Increased dyspnea since last year; minimal cough; smoked 2pk/d 20 years; quit 6 yrs...Worsening SOB past year. (HX smoking chronic bronchitis or emphysema)



C. Medical Management:

- Albuterol MDI: 2 to 4 puffs qid
- Atrovent MDI: 2 puffs qid
- Theophylline: 200 mg bid
- Prednisone 10 mg od (Continuously 3 yrs without estrogen: osteoporosis + fx)

Comments re Steroid Rx: Steroids in emphysema? Steroids = asthma Rx

Trial oral or inhalants are potentially harmful.

Pts responding have mixed condition ♂ asthma

Be sure to give estrogen or Fosamax with steroids

re Atrovent: In combination ♂ Albuterol has additive effect esp in COPD

Workup: FEV₁ = 0.3L (18% predicted)

RV = 7.0 (30% predicted)

DLCO + 31% predicted

ABG on RA = P_aQ₂ = 259

CXR: flat diaphragm 2° hyperinflation; compression Fx's

HPI: AB's 6 - 7x/yr; O₂ prn; SOB = no exercise; Hospitalization 4 x

re AB's in COPD: If 2 of the 3 conditions present:

- viz Increasing dyspnea; b. Increasing sputum volume; c. Increasing sputum purulence

re O2 Therapy:

- Extends life in hypoxic pt
- Improved cardiac function; Improves exercise & ADLs
- $FEV_1 < 1.0L$ (or $< 50\%$ predicted)
- Home O_2 : US/yr = \$400,000,000

re Indications for O2 Therapy:

- Absolute: $PaO_2 < 55 = SaO_2 < 88\%$
- \bar{c} corpulmonale: $PaO_2 55 - 59$ $SaO_2 < 89\%$
- Only in specific situations

re Exercise/Pulmonary Rehab in COPD:

- ↓ hosp days
- ↑ exercise tolerance and endurance
- ↓ dyspnea, ↑ ability to do ADLs
- Doesn't improve FEV_1 or PaO_2
- Benefits may be short lived

Acute Respiratory Failure in COPD:

Comparing pts with ARF from all causes, COPD pts have the highest survival rate; 75-90% survive to discharge; 2 yr survival = 28-70%

D. Advanced Therapies:

re Transplant:

- Pt with $FEV_1 < 0.75L$: 1 yr mortality = 30%; 10 yr mortality = 95%
- 40-50% of lung transplants in COPD pts
- 1.5 to 2 yr wait
- Age limit: 60 yrs
- Survival rate: 1,2,3 yr survival = 72%, 64%, 55%
- Lung Transplant in US:
1985: <50; 1995: >1,000
1990-95: 500 - >2,000 pts awaiting

MEDICAL TID BITS:

Reyes Syndrome: Only two cases were reported in 1997 compared to 550 cases in 1980. Parents are still giving ASA for viral diseases despite the warning labels. Aspirin is a no-no esp in children with chicken pox or flu.

Data on 50,000 men show that consuming ten 8 oz glasses of any fluid, ie water, coffee or soda cuts the risk of bladder cancer in 1/2...

A preliminary study shows that chronic use of NSAID's by the elderly may raise their serum creatinine levels.

A new report shows that women cyclists (who clock 60 miles/week): 35% experience genital numbness and 14% have difficulty urinating.

Another study of men cyclists reveals 4% (who ride 100 miles/week) have erectile dysfunction.

Researchers from John Hopkins concluded: The PSA after treatment of prostate cancer should fall to zero (ie after surgery or radiation). Any increase in PSA means some tumor cells escaped and are growing elsewhere.

Hopkins researchers have found that both the timing and speed at which the PSA level rises is critical (Gleason scores 5 to 7) When the PSA levels rose within 2 years of surgery, but took more than 10 months to double meant that the cancer grew too slowly to warrant further treatment.

Time: May 17, '99

MEDICAL TID BITS...

Latex condoms are more popular. Compared to newer polyurethane condoms, the latex condom is 1/10 as likely to break and 1/3 as likely to slip off...

The 20 year old beta blocker metoprolol is just as effective in treating congestive heart failure as carvedilol and 1/3 its cost. Both improve the patient's endurance by improving the heart's pumping ability.

A new study suggests that young women with total cholesterol below 150 are twice as prone to depression as those with higher levels.

An AARP poll reveals that 63% over age 18 don't want to live to be 100. The average person wants to live to 91. The reasons were as follows:

- 43% feared declining health
- 38% feared not having enough money
- 13% feared loss of mental facilities
- 12% feared dependence on others.

Time: Jun 7, '99

PROTALGIA: (Excerpts from *Stitches* editor John Cocker MD's humorous account)

Back in the days when referring everyone to the Emergency hadn't been invented, I was on call one weekend when the *dominatrix phoned at lunch time...

"You the doctor? You come!"

"What's the problem?"

"You the doctor? You come!"

"Tell me the problem?"

"You the doctor? You come!"

I take to being ordered about in the same way most people do, so I persisted.

"First you tell me the problem."

"Look, are you the doctor?"

"Well, yes."

"Then you come!"

After a bit more of this I had to give up. Ungraciously, I said I would come. But I didn't hurry. I did a few things first and finally drove out into the country to the restaurant.

*(The dominatrix was an ethnic restaurant proprietor...assertive, past the point of rudeness, that timid diners ate there only once...)

Standing in front of the restaurant was Madame, wearing her big apron. I got out of the car, picked up my bag and approached.

"It's too late," she said. "Too late. You should have come sooner! It's all over! Finished!"

I felt bad. I could have come sooner — why didn't the stupid woman tell me there was an emergency. Now I have to get the coroner. Then there would be an inquest, then the College investigator, then the trial. Who would feed my poor children? Years of conscientious work wiped out in one stroke by this stupid woman!

I kept walking toward her, intending to go in and see the deceased...

"You're not coming in! His nose bleed has stopped and he's eating dessert!"

Classified Notices

To place a classified notice:

HMA members.—Please send a signed and type-written ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in HMJ as space is available.

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ASSISTANT PROFESSOR OF MEDICINE.— Pos. No. 085029T, M3, Dept. of Medicine, John A. Burns School of Medicine, F/T, temporary, to begin approx. September 1999 for one year, non-tenurable. Duties: Develop academic career in geriatrics, supervise residents and fellows in the care of older patients, participate in research and education with collaborators in Japan, develop research/medical education grant-funded projects. MQS: MD degree; board eligible or board certified, 2-year fellowship in Geriatric Medicine, Certified (or eligible for certification) in Geriatric Medicine and demonstrated ability in teaching. Min. Annual Sal: \$78,924. Send updated c.v., bibliography, and three letters of recommendation to Patricia Lanoie Blanchette, MD, MPH, Geriatric Medicine Program, John A. Burns School of Medicine, University of Hawaii, 347 No. Kuakini St., HPM-9, Honolulu, HI 96817. Closing Date: 08/02/99. An EEO/AA institution.



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IF IT IS A FACT, PROOF IS NECESSARY. IF IT'S A MIRACLE ANY SORT OF EVIDENCE WILL DO.

While traditional medical care requires a comprehensive education, examination, demonstrated competence, continuing medical education, peer review, clinical monitoring, and licensure, "alternative-care" requires nothing more than self-appointment. Herbal medicine, energy healing, massage therapy, acupuncture, chiropractic, naturopathy, faith healing are the order of the day in various medical venues. The body of American medicine is being invaded by pretenders in ever increasing numbers. Some HMOs are offering "alternative-care" and some states require that complementary plans be offered! At Maui Memorial Hospital (excuse me, Medical Center) we have lectures from a naturopath with CME approval yet. (I'm not making this up!) No doubt phrenology, iridology, and palm reading are soon to be added. Hey, why not? Just forget about education, intelligence, logic and the like, and merely adopt the "eastern" philosophy of mystical story-telling. Koch, Pasteur, Lister, Halsted, Fleming, Sabin, Salk, and the other medical science giants are spinning in their graves. The year 2000 is looking more like the year 1900. Where is Flexner when we need him again?

IS THIS THE BEST I'M GONNA FEEL?

The most useful dose of science to date has been injected into the continuing debate relative to the medical benefits of marijuana. An Institute of Medicine panel was convened at the request of the White House Office of National Drug Control Policy. The study took 18 months to complete at a cost of \$896,000, and was not done for political reasons, but to inform the current debate. The panel deliberately avoided entering the policy arena. The conclusion was that there is basic research which suggests that active substances in marijuana can be effective in control of pain and chemotherapy-induced nausea associated with AIDS and advanced cancer. The panel did not find existing data to support the use of the drug for glaucoma, multiple sclerosis, Parkinson's disease or Huntington's disease. Additionally, it was noted that the smoked form of marijuana has definite limitations with possible harmful results, and a better delivery system is needed. Therefore, smoked marijuana should be recommended only for those terminally ill patients or those with debilitating symptoms who do not respond to approved drugs.

THE ISSUE IS NOT SANITY VS. INSANITY, BUT MORE OR LESS INSANITY.

A 78 year old man appeared in the ER with chest pain, dizziness, and blackouts. He gave a lucid and coherent history, but the nurse noted that he was "somewhat paranoid" and stated that the IRS gave him AIDS twice. (Everyone who has not been screwed-over by the IRS, raise your hand). His cardiologist and attending physician believed he was rational when the surgical procedure was explained and consent obtained. When asked if he wanted his children informed, he was resentful and said no. He signed the form in the presence of a cousin who was visiting him. After the surgery, he suffered a stroke and was severely disabled. His adult children brought a law suit claiming a lack of informed consent, and stated that he had previously been treated for psychiatric problems. The jury cleared the physicians, and the appeals court upheld the decision noting that the patient functioned normally in most situations. Still, for those of us dealing with geriatric patients, it is prudent to have another member of the family in attendance, especially adult offspring, when explaining the necessity for surgery.

AUTHORITY TENDS TO ASSIGN JOBS TO THOSE LEAST ABLE TO DO THEM.

Two crash victims with severe head injuries were brought to a small rural medical hospital. The physician in charge transferred the patients to a larger facility for adequate care. One of the patients died. A Department of Health and Human Services administrative judge ruled that the transfer was inappropriate and levied a fine of \$100,000 against the physician for violating the *Emergency Medical Treatment and Active Labor Act*. On appeal, the court delivered a stern rebuke to the HHS ruling and found that the doctor had followed the letter and spirit of the law. The Circuit Court of Appeals recognized that the patients' best chance of survival was with stabilization and transfer. "The doctor acted properly under very trying and difficult circumstances and should be exonerated of any wrongdoing." But the real issue is why did the HHS engage such a moron for a judge in the first place?

NOTHING IS SO GOOD AS IT SEEMS BEFOREHAND.

The stampede to buy sport utility vehicles (SUVs) has produced some interesting and not too pretty trauma data. These top heavy road hogs are much more likely to roll over in crashes, and the fatality rate in rollovers is more than twice as high as for cars. SUVs, minivans, and pickups make up about one third of registered vehicles, but were involved in half the deaths that occurred in multiple vehicle crashes. Moreover, they are hard on occupants of ordinary cars, causing at least 2,000 additional deaths that would not have occurred had the auto collided with another car instead of a SUV. The high bumper placement, heavier weight, and resistance to bending when crashed into, makes them more deadly than autos. Starting this fall, the Dept. of Transportation, will require manufacturers to apply a warning label to SUVs about the high rollover danger. Why do so many yuppies want a clunky-looking, over-priced, gas-guzzling, four or five passenger, four by four, anyway?

TRUST ONLY THOSE WHO STAND TO LOSE AS MUCH AS YOU DO WHEN THINGS GO WRONG.

Much troubled PhyCor, the practice management company, is bringing a lawsuit against a Florida dermatologist, Norman Friedman, M.D., and 49 other "John Doe" defendants, alleging libel. By posting messages on an Internet chat board the defendants related problems with PhyCor's management. From a high of \$32 per share in October 1997, PhyCor stock plummeted to \$5 in October 1998 and has stayed at that level. A typical Internet message was "Who would buy PhyCor if they really know the degree of anger and dejection at these clinics?" Dr. Friedman claims that everything he said concerning PhyCor is true to the best of his knowledge, and his mother taught him to stand up to bullies. According to one attorney, PhyCor will have to prove a cause-and-effect relationship which will be a difficult thing to do. But, as one physician said, "I think it's harassment more than anything, but it will shut people up."

Addenda

- ❖ The first electric dental drill was patented in 1875.
- ❖ A challenge: try to explain Hitler to a teenager.
- ❖ Four years after the first Edsel rolled off the assembly line, only one car had ever been reported stolen.

Aloha and keep the faith — rts ■

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Cover art and descriptive text by Dietrich Varez, Volcano, Hawaii. All rights reserved by the artist.

Volcano House (1866)

This simple thatched roof building provided the first lodging
in the volcano area of Hawaii.



Editorial

Norman Goldstein MD
Editor, Hawaii Medical Journal

Dr. Mary S. Sheridan, Associate Professor in the Arts & Science Department at Hawaii Pacific University, reviews her study of SIDS risk reduction in Hawaii. She received 50% of the surveys sent to pediatricians, obstetricians and family practitioners. While Hawaii is fortunate in having one of the lowest SIDS rates in the nation, we still had 30 SIDS deaths annually in the early 1990's - and infants continue to die even if the "Back to Sleep" recommendations are followed. Every physician should read this article and be aware of SIDS and "Back to Sleep" to educate our patients, our children and grandchildren.

The Manuscript by Dr. Gene Doo and medical student David S. Johnson may seem a very specialized subject only of interest to otolaryngologists and Emergency Room physicians, but all physicians see patients with epistaxis, even the obstetrician and the psychiatrist. The authors reviewed 532 cases of epistaxis in a very busy practice during a five and a half year period.

With the high cost for inpatient and emergency room care, it is very refreshing to see an effective, easily administered and inexpensive treatment for posterior epistaxis.

Oxymetazoline (Afrin, Allerest, Dristan *et al*) cost less than \$5.00 for 15 cc, and is OTC.

Mahalo, Mary, Gene and David.



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Hawaii Medical Association Archives

(From the Hawaii Medical Library Newsletter, February 1999.)

In January 1999, HML unveiled a new addition to the Archives and Rare Books Collection home page, "Hawaii Medical Association (HMA) Archives." The URL for this collection is <http://hml.org/WWW/hma/hmaindex.html>.

This page includes the following:

- A brief introduction to HMA's beginnings;
- Minutes, 1905-1925, a copy of meeting minutes transcribed from the original handwritten and typewritten minute books;
- Transactions of Annual Meetings, a bibliography of papers and abstracts published in the transactions of the Association's annual meetings from 1904 to 1936.

All of the text in this collection is enhanced with links to biographies from the In Memoriam - Doctors in Hawaii series.

HML is very excited about making new material, in this "older" material, more accessible to its users. Special thanks go out to the Hawaii Medical Association for allowing HML to reproduce and share this information with the world and Dr. Ann Catts for transcribing the material.

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Medical School Hotline

The John A. Burns School of Medicine Today

Sherrel L. Hammar, M.D.
Interim Dean

The John A. Burns School of Medicine (JABSOM), University of Hawaii at Manoa, has received much attention this year. The very existence of the Medical School has been challenged. The continual threats and rumors of closure, acute lack of funding and negative publicity from the media and local critics have been demoralizing and have affected recruitment of a permanent Dean.

However, the overwhelming support from the Hawaii Medical Association, Hawaii Coalition for Health, Friends of the Medical School, hospitals, alumni, students and faculty has been impressive and gratifying. The response and resolve of supporters from many sectors and groups in the State have bonded the faculty, students, alumni, and community supporters together. Morale at the School is high. There is much activity going on but much work is still to be done. Regular meetings between the support groups and the Dean's office are ongoing to coordinate campaign strategies and to plan public relations, political activities, lobbying efforts, and fund raising.

The good news is that the Liaison Committee on Medical Education (LCME) has reaffirmed the accreditation of the School until the year 2002. The Committee continues to raise concerns regarding the limited funding and financial stability of the School. The Problem-based Learning (PBL) curriculum, however, received very positive comments. The improvements and continual refinements of the program were recognized. The students' performances in the United States Medical Licensing Examination (USMLE) and National Resident Matching Program (NRMP) supported the success of our PBL curriculum.

All of the School's 13 residency and fellowship programs for physicians were accredited by their national Residency Review Committees. The Accreditation Council for Graduate Medical Education (ACGME) recently reviewed the School's graduate medical education programs and full accreditation is expected.

A new building for Dr. Ryuzo Yanagimachi's cloning research has been approved and funded. Construction is expected to begin to house the Honolulu Institute of Biogenesis Research within the School of Medicine.

Recruitment is currently underway to fill the newly created position of Associate Dean for Business and Hospital Affairs. This individual will assist with the School's long range financial planning and relationships with our affiliate hospitals.

Several retirements have occurred and replacements will be recruited. The Department of Cell Molecular Biology (formerly named the Department of Genetics and Molecular Biology) will coordinate the Cell Molecular Biology and Interdisciplinary Graduate Programs. A search for a chairperson to head this interdisciplinary department will begin. Plans for collaborating with our community hospitals and partnering with community resources and facilities are being developed.

In a few weeks, the Class of 2003 will enter its first year. These 62 students are impressive by their credentials and by their diversity. The class will be formally welcomed into the medical community by the JABSOM Class of 1978 at the White Coat Ceremony on Friday, August 6, 1999.

In spite of troubling times, JABSOM is weathering the storms and continues to prepare for a bright future with the support of the Hawaii community. The following are some key issues and facts about JABSOM.

Impact on students:

- The major purpose of the medical school is to provide an opportunity for a medical education previously unavailable to residents of Hawai'i and other Pacific islands.

- Since 1975, 145 Hawaiians, 32 Guamanians, 80 Filipinos, 14 Samoans and 14 Micronesians have their received MD's from JABSOM.

Impact on health care:

- The major emphasis of the medical school is to train students to a high level of competence as primary care physicians with the goal of improving health care in Hawai'i and the Pacific Area.

- The presence of a medical school improves the overall quality of health care in a community, and this is recognized by our practicing physicians, 93% of whom, a recent poll by the Hawai'i Medical Association opposed closure of the medical school.

- Continuing medical education, which enables practicing physicians to keep abreast of the latest techniques and standards of care, is provided primarily by medical school faculty.

- Clinical expertise to support tertiary care in major hospitals are provided by physicians affiliated with the school of medicine

- Outreach training, especially to rural and outer-island facilities is done almost exclusively by faculty and programs affiliated with the medical school

- The majority of in-hospital care of patients is provided by residents in training programs, which are all under the auspices of the medical school

- Research and improvements in health care requires dedicated individuals to identify problems in the community, develop and test hypotheses, and eventually devise solutions to improve care, all of which is a vital part of the educational programs here at the school of medicine and a primary obligation of the faculty

Impact on the community:

- Making a medical education more accessible to residents of the State ensures that all ethnic and socioeconomic groups are represented in the medical profession.

- Local people appreciate being cared for by local physicians who have an appreciation not only of their diverse cultures but their unique healthcare needs as well. As an example, the late Nadine Kahanamoku left the bulk of her estate to the medical school to provide scholarships for students because she appreciated having 'local kids' take care of her while she was hospitalized.

- Training students in the community and exposing them to community programs and resources increases the likelihood they will return to practice in those areas.

- Community service is ingrained in JABSOM students who are eager to give back to the community, and highly recognized and rewarded by the institution which sends the message that altruism and duty are critical elements of the medical profession; the aim is to cultivate in them a strong commitment to community service.

- Care for indigent patients is provided at many community clinics by faculty and residents.

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Risk Reduction to Prevent Sudden Infant Death Syndrome: Knowledge and Opinions of Hawaii Physicians

Mary S. Sheridan PhD, ACSW

Introduction

Sudden infant Death Syndrome (SIDS) is the sudden and unexpected death of an infant for which, after an adequate investigation, no cause is found. Typically, SIDS deaths occur during periods of sleep, in infants under six months of age. SIDS has been considered mysterious because, after thirty years of investigation, the cause and mechanisms remain unknown, there is no way to predict which infants might be vulnerable to SIDS and—until a few years ago—there was no way to reduce the risk of a SIDS death.

Hypotheses that SIDS might occur more frequently in the prone sleep position date from the 1950s, but serious attention was not given to them until the mid-1980s.¹ Campaigns to reduce the frequency of prone sleeping in infancy were begun in Australia and several European countries. In every country, the change in sleep position recommendations was followed by a rapid decline in the SIDS rate. In 1992, the American Academy of Pediatrics made an official recommendation that healthy infants be placed to sleep on their back or side,² and more recently modified the recommendation to back only.³ Since 1992, the U.S. SIDS rate has dropped from a rate of 1.30 deaths per 1,000 live births in 1993 to an estimated rate of 0.69 deaths per 1,000 live births in 1997.⁴ No other factor than change in sleep position is believed to account for the magnitude of this decrease. However, there is still no clear explanation of why infants die less frequently in the supine position than in the prone.

In the U.S., sleep position recommendations have been presented to the public via the "Back to Sleep" campaign co-sponsored by the National Institute of Child Health and Human Development. Additional risk reduction recommendations have been included in "Back to Sleep", based on factors also associated with SIDS deaths. These include avoidance of overheating, soft bedding, and exposure to cigarette smoke. Although sleep positioning has received the major attention in the risk reduction campaign, these factors and tobacco smoke exposure in particular are clearly reducible risks not only for SIDS, but for other diseases and problems of infancy.

It is one thing to make public health recommendations, but another to see them implemented. Since most health care providers strongly advocated prone sleeping prior to these counter-intuitive recommendations, "Back to Sleep" called for significant changes in parental and provider behaviors. Although Hawaii's SIDS rate is one of the lowest in the nation, and fewer than thirty SIDS deaths occurred annually in Hawaii in the early 1990s, the prospect of any risk reduction had to be taken seriously. Therefore, the Hawaii SIDS program was concerned to see whether national recommendations were being implemented in Hawaii.

Methods and Results

In February 1996, the Hawaii SIDS Program received a grant from the Children's Miracle Network Telethon (Kapiolani Medical Center for Women and Children) to survey Hawaii pediatricians, obstetricians, and family practitioners about their knowledge and opinions of the "Back to Sleep" recommendations. The surveys included questions on the practitioner's recommendations to parents about infant sleep position, the practitioner's agreement with the "Back to Sleep" recommendations, and an opportunity for the practitioner to request professional or lay information on "Back to Sleep." Approximately 600 surveys were mailed with the assistance of Hawaii Pacific University research students. Three hundred fourteen responses were received, for an approximate return rate of 50%. A number of anonymous responses were received, but of those identifiable, 123 responses (43.8%) were from pediatricians, 68 (24.2%) from obstetricians, and 90 (32.0%) from family practitioners or physicians in other specialties.

In general, respondents were familiar with the "Back to Sleep" recommendations regarding sleep positioning, and supported them. Positions favored by respondents are shown in Table 1.

Table 1.—Physician Recommendations

Position Recommended:	Number responding to question	Percent responding to question
Both side and back	101	39%
Side	75	29%
No recommendation	53	20.4%
Prone	6	2.3%
Not applicable (Respondent does not work with infants/pregnant women)	24	9.3%

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Pediatricians were more likely than other practitioners ($p<0.01$) to recommend supine or side sleeping, and to make recommendations about sleep position. None of the respondents suggesting prone sleeping was identified as a pediatrician, and only 6 pediatricians did not recommend a sleep position for their patients during infancy. (See Table 2)

Table 2.—Recommendations by Field of Practice*

	Peds.	OB/Gyn.	Fam. Prac.
Back, side, or both	109 (94.8%)	55 (83.3%)	60 (80%)
Prone or no recommendation	6 (5.2%)	11 (16.7%)	15 (20%)

*percentages are of identifiable respondents to this question, by specialty.
 $p<0.01$

Physicians strongly recommended that pregnant women and infants avoid cigarette smoke. Two hundred sixty two reported giving this advice to their patients. Only 5 (1 pediatrician) stated that they did not make this recommendation. Ten stated that they recommended smoke avoidance only if asked.

Although physicians behaved in accordance with the "Back to Sleep" recommendations, their personal opinions about the recommendations varied. (See Tables 3 and 4.) Pediatricians were more likely to have an opinion about the recommendations, and to favor them. Many physicians remained unsure. Given the relative recency of these recommendations and the absence of scientific explanation for why they work, some uncertainty is probably appropriate. Even within the SIDS community, these recommendations have been controversial and both scientists and clinicians are troubled by the lack of empirically-tested data and physiologically-based theories.

Table 4.—Agreement with Recommendations, by Specialty

	Peds.	OB/Gyn.	Fam. Prac.
Agree at any level	77 (82.8%)	31 (62%)	42 (60%)
Disagree at any level	6 (6.4%)	4 (8%)	3 (4.3%)
No opinion	10 (10.8%)	15 (30%)	25 (35.7%)

(Note: differences among specialties are significant at the level of 0.05 using chi square.)

Respondents to the survey were gratifyingly eager to know more about the "Back to Sleep" recommendations. Seventy-nine physicians requested further information for themselves. One hundred fifty-five requested brochures for their patients.⁵

Conclusions

Information about SIDS risk reduction has diffused to and been accepted by most physicians responding to this survey. In spite of any personal reservations they may have had, responding physicians appeared to recognize these recommendations as the current standard of care. They were receptive to more information for themselves and their patients. This suggests, as has been found elsewhere, that "the 1992 AAP [American Academy of Pediatrics] Statement has had a significant impact on the routine advice provided to families regarding infant sleep practices, including infant sleep position."⁶

With all the enthusiasm about SIDS risk reduction and SIDS rate reduction, one important thing should not be forgotten. Infants continue to die, even when risk reduction recommendations are followed. SIDS deaths have been reduced, not eliminated. Compassionate care is still important for those who suffer this loss.

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Table 3.—Physicians' Agreement with SIDS Risk Reduction Recommendation

	Number responding to question (N=269)	Percent of those responding to question
Strongly agree	53	19.7
Agree	101	37.6
Not sure	51	19.0
Disagree	2	0.7
Strongly disagree	10	3.7
No opinion	52	19.3

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Oxymetazoline in the Treatment of Posterior Epistaxis

Gene Doo MD and David S. Johnson MSIV

Abstract

In this retrospective study, 36 patients were given oxymetazoline as a first step in treatment for posterior epistaxis. In 75% of the cases, epistaxis was effectively treated with oxymetazoline with no recurrent bleeding. All cases with recurrence resolved with continued administration of oxymetazoline. The results of this study propose a pharmacologic intervention for the treatment of posterior epistaxis.

Introduction

Epidemiology

About 60% of the western population will experience at least one episode of epistaxis during their lifetime.¹ According to Josephson,² 15 per 10,000 persons require attention by a physician for epistaxis annually, and of the 15, 1.6 persons will require hospitalization.

The cause of epistaxis is often obscure, and the patient often is unable to recall the precipitating factor. However, desiccation from dry air with resulting mucosal wall cracking, nose picking, or hard nose blowing are the most common causes of anterior nose bleeds, whereas systemic disease almost always manifest themselves as posterior bleeds.³ Table 1 lists local and systemic causes of epistaxis.

Table 1.— Etiology of Epistaxis

Local	Systemic
Nasal of facial trauma	Atherosclerosis of nasal blood vessels
Upper respiratory tract infections	Hypertension
Nose picking	Diabetes Mellitus
Allergies	Anticoagulant therapy
Low home humidity	Abrupt changes in barometric pressure
Nasal polyps	Pregnancy
Foreign body	Chemotherapy
Environmental irritants	Blood dyscrasias
Nasopharyngeal neoplasm	Hereditary hemorrhagic telangiectasis
Traumatic internal carotid aneurysm	Folic acid deficiency
Postoperative bleed	Alcoholism
	Chronic nephritis
	Migraine headache
	Acute febrile illness

Sites of bleeding

Anterior epistaxis almost always originates from Kiesselbach's plexus, but can also occur from the branches of the sphenopalatine artery. It is more common in persons under 40 years of age, and usually a result from trauma.¹

Posterior epistaxis originates most commonly from the sphenopalatine artery as it emerges from behind the inferior and middle turbinates. It accounts for 5-10% of all cases of epistaxis and is more common in persons over 40 years of age.¹ Posterior epistaxis is usually associated with systemic disease.

Treatment

Pinching the nose for 10-15 minutes locally controls anterior epistaxis. For recalcitrant bleeding, suctioning, with silver nitrate cauterization is performed. For posterior epistaxis, it is difficult to visually locate the site of hemorrhage due to the anatomy of the posterior part of the nose and because posterior nosebleeds are usually profuse. Local packing has therefore been the traditional approach to control hemorrhage. Cut-down tampons, inflated trimmed Foley catheters, nasal tampon balloons, or MeroCel have been utilized. The disadvantage of posterior packing is that they require hospital admission for observation of possible complications (Table 2.). Other methods of treatment include electrocautery, ligation surgery, arterial embolization and cryotherapy.

Table 2.— Complications of Local Posterior Packing

Hypoxemia
Sepsis
Esophageal perforation
Hemotympanum
Middle ear effusion
Acute otitis media
Acute sinusitis
Ruptured tampon balloon with aspiration of saline
Necrosis of mucous membranes
Pressure necrosis of skin

Oxymetazoline Hydrochloride

Oxymetazoline is a topical decongestant, which acts as a local vasoconstrictor of intermediate duration. We believe that the vasoconstrictive effects of oxymetazoline can be applied to arresting nosebleeds. Kreml and Noorily demonstrated that the use of oxymetazoline alone was sufficient to control 65% of cases of both anterior and posterior epistaxis presented to an emergency center [4]. In addition to the ease of administration, other factors which make oxymetazoline attractive are cost (average cost less than \$5.00), avoidance of hospitalization, and avoidance of uncomfortable procedures for the patient.

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Materials and Methods

In this study, 532 cases of epistaxis were reviewed from the office of an Otolaryngology specialist from January 1, 1991 to August 30, 1996. Only adults with active posterior nosebleeds were included in the study. Cases with mild epistaxis due to allergies or sinusitis were not included in the study as these patients were treated with corticosteroid inhalers, antihistamines, and/or antibiotics. Data regarding age, sex, etiology, risk factors, treatment, follow up, and hospitalization were collected. Recurrence of epistaxis was recorded if there was any evidence of active bleeding, which included trace amounts within 6 months.

Four to six sprays of oxymetazoline in each nostril were given as a first step in treatment. Patients were then instructed to remain in a sitting position and rest quietly. Patients were observed for one to two hours, and readministration of oxymetazoline was done if bleeding persisted. After severe bleeding stopped, the patients were sent home and instructed to continue oxymetazoline administration at a dose of two sprays in affected side every 6 hours until returning for follow up assessment within one to three days.

Results (Tables 3 and 4)

Of the 532 cases reviewed, 36 patients were selected for this retrospective study. All data regarding gender, age, risk factors and etiology is presented in table 3. There was a good distribution among men and women, 17 verses 19 respectively. Average age for patients with posterior epistaxis was essentially the same for both men and women (64 yrs for male, and 62 yrs for females.)

Of the risk factors included in the study, hypertension was present in most patients (13; 36%), followed by acetylsalicylic acid use (6; 17%), diabetes mellitus (5; 14%), coumadin use (3; 8%), thrombocytopenia (2; 6%), and radiation therapy (2; 6%).

Twenty-eight patients (78%) did not have a causal history for epistaxis. Trauma accounted for 4 cases (11%), and the remaining etiologies accounted for one case each. One case of sinusitis was included, because epistaxis was profuse, and was subsequently treated with oxymetazoline.

Oxymetazoline was administered in all cases. Eight cases had additional gel foam placement, not to be used as packing, but to provide topical application of oxymetazoline. Recurrence occurred in 9 patients (25%). Three patients were admitted to the hospital, 2 for blood transfusions, while the other was admitted due to his preexisting history of congestive heart failure, atrial fibrillation and hypertension in addition to blood loss. In all three admissions, oxymetazoline was continued without posterior packing. In all cases, bleeding stopped eventually stopped. All other cases of recurrent epistaxis were mild bleeds, which eventually ceased after continued oxymetazoline use.

The influence that risk factors had on outcome is depicted in table 4. Of the 21 cases with a history of epistaxis, 6 (29%) had recurrence, whereas only 3 of the 15 cases (20%) with no history of epistaxis had recurrent nosebleed. Of the 13 cases with a history of hypertension, 7 (54%) had recurrence, whereas only 2 of 23 cases (9%) with no history of hypertension had recurrence. Three of 5 cases (60%) with a history of diabetes had recurrence, while only 6 of 31 cases (19%) of non-diabetics did. Of the 6 cases with a history of acetylsalicylic acid use, 2 (33%) had recurrence, while 7 of 30 cases (23%) with no acetylsalicylic acid use had recurrence.

Table 3.— Results

	Patients (n)	% Patients
Male	17	47
Female	19	53
Age		
20-39	5	14
40-59	11	31
≥60	20	56
Risk Factors		
ASA	6	17
Coumadin	3	8
Hypertension	13	36
Diabetes Mellitus	5	14
Thrombocytopenia	2	6
Radiation Treatment	2	6
Etiology		
Unknown	28	78
Trauma	4	11
Polyps	1	3
Infection	1	3
Sinusitis	1	3
Pregnancy	1	3
Efficacy		
No Recurrent Bleeding	27	75
Recurrent Bleeding	9	25

Table 4.— Influence of Risk Factors on Recurrence

Risk Factor	Patients (n)	Recurrence (%)
Epistaxis		
Yes	21	(6/21) 29%
No	15	(3/15) 20%
Hypertension		
Yes	13	(7/13) 54%
No	23	(2/23) 9%
Diabetes Mellitus		
Yes	5	(3/5) 60%
No	31	(6/31) 19%
ASA use		
Yes	6	(2/6) 33%
No	30	(7/30) 23%

Discussion

In this study, 8.5% of epistaxis cases were of posterior origin. Though lower than the estimated occurrence of 10% reported by Perretta,⁵ some of the discrepancy can be accounted for by the fact that mild nosebleeds associated with chronic sinusitis and allergies were not included. In 78% of the cases, there was no causal history for epistaxis. This is consistent with Petruson who found that in the majority of cases, the cause was unknown.

Hypertension is a major risk factor for posterior epistaxis.⁵⁻⁷ In this study, 36% of the total cases have a positive history of hypertension, and of this subgroup, 54% had recurrence. Of the nine cases with recurrent bleed, 7 had hypertension and 3 were diabetics. It is

possible that pathological structural changes within the arteriole wall associated with hypertension and diabetes may result in reduction of the blood vessels' ability to change diameter in response to oxymetazoline administration. Nonetheless, care should be taken with oxymetazoline therapy in this population as it may be contraindicated due to its sympathomimetic property. Six of 21 cases with a positive history of previous epistaxis had recurrence, which may suggest that oxymetazoline is not as effective in patients with recurrent epistaxis. However, it more likely re-establishes the fact that posterior epistaxis is mostly secondary to underlying systemic disease, that will continue until that underlying cause is addressed. In all cases with recurrent epistaxis, oxymetazoline was continued, and all nosebleeds did eventually cease. There is the possibility that the epistaxis could have spontaneously stopped independent of treatment. This study falls short of not having a prospective randomized placebo controlled study. Therefore, further investigations using large randomized controlled trials are necessary.

Oxymetazoline offers a cost-effective method of treatment. Due to the necessity of monitoring patients following posterior packing, or the need for surgery, the majority of patients with posterior epistaxis will be admitted to the hospital. Duration of inpatient care

can range from 1 to 36 days, with a mean stay of 5.5 days.³ Cost can range from \$1,000 to over \$20,000.⁸ In sharp contrast, posterior epistaxis can be treated on an outpatient basis with oxymetazoline at cost of less than \$5.00 per 15 ml, and spares the patient from the discomfort associated with posterior packing. In addition to its low cost, it is also easily administered and therefore an attractive first-line therapy for posterior epistaxis.

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LIFE IN THESE PARTS...

Profile of a Physician Activist

(From MidWeek, June 2, 99)

"KEKUNI BLAISDELL is the rarest of men—he balances living in two very different worlds, and makes it look easy. He is one of Hawaii's best physicians, specializing in blood disorders. But he is also a Hawaiian activist who believes that Native Hawaiians should live as much as possible according to traditional ways..."

"I've refused to be bleached, which is what they tried to do to us when I was at Kamehameha Schools...They wanted to make us like everybody else, to de-Hawaiianize us."

Kekuni credits his teacher Donald Mitchell who came from Missouri, and taught him to be proud of his culture and to live it. And encouraged him to be a doctor...

A Congressional report by the Native Hawaiians Study Commission "highlighted the health, cultural and economic plight of the Native Hawaiian, but nothing was being done about it. Again, the policy was to make us like everybody else."

By 1988, with the help of Senator Dan Inouye, Kekuni helped set up a health care system for Hawaiians. "But that is being threatened by the Republican Congress... Fortunately, Dan Inouye is helping us and will submit new legislation to keep the program going. There is certainly a need. From the 1980s to the 1990s, life expectancy was up for all other groups in Hawaii except for Hawaiians, and ours was down. Our efforts have been health education and disease prevention, but we want to include nutrition and fitness and native healing programs." Kekuni helped start the UH medical school and the Native Hawaiian Physicians Association.

"We have to go back to eating the traditional Hawaiian diet and to do that we need land and water to grow taro. Health isn't just diet, it's a whole way of life, and for that we need our land and resources."

FINDING FALLACY IN OLD SAYINGS

(Excerpts from Mid Week Editor Don Chapman's column)

Don satirized: "In life as in driving, you don't want to spend too much time looking in the rear view mirror. It can be hazardous to your future. Glancing back recently, it became apparent that some of the things our parents taught us — and that we've passed on to our kids — aren't necessarily true."

"You can always trust your doctor." (Unless he/she has a gun pointed at his/her head by an HMO...Which stands for Hopeless Medicare Options...)

"A penny saved is a penny earned." (If you found a penny on the sidewalk everyday for a year, you'd have almost enough to take a family of four for 99 cent burgers)

"Always respect the president of the United States." (I cannot tell a lie, the only thing I've every done with a cigar is light it up...Let me repeat myself: I did not inhale...And bombing

Yugoslavia really is in the best interest of all Americans...)

"Life is what you make of it" (So you make plans for a picnic with family and friends in a beautiful spot and a mountain collapses on top of your head)

"All you need is love." (Half of all marriages end in divorce — Half of all divorces are nasty and costly)

"Keep your nose to the grindstone." (Ouch!)

"A dog is man's best friend." (Every day in America, 1,000 people get bitten by dogs)

"Two heads are better than one." (So how did five hand-picked heads bring down Bishop Estate?)

"America, land of the free, home of the brave." (America, land of the greedy, home of the traitorous — Or is it lazy and incompetent?)

"Democrats always look out for the little guy." (Little means any income between that of the governor and a Bishop Estate trustee)

(Ed. Guess the Mid Week editor has to vent too...)

POTPOURRI...

I was filling in as a receptionist at my husband's dental office when a patient called to cancel an appointment because, he said, he felt a migraine coming on.

"You should talk to my husband," I offered, "He gets migraines too, but he has a prescription he takes before the headaches immobilize him."

I also advised, "It might be helpful if you have a cola drink right away."

After he hung up, my husband asked me, "Who was that?" I told him.

"Oh yeah?" said my husband. "He's the head of neurology at the University Hospital."

(Jan Foralger Tingey, Reader's Digest, June '99)

How Do You Do?

(Stitches Dec '98)

While doing a locum in general practice, I was not always oriented as to how the doctor greets his patients...

I opened the exam room door and was flattered by the clean, fresh young man standing up as I entered.

Initially I ignored the proffered right hand, introduced myself and sat down because both my hands were preoccupied with the chart, stethoscope, pen, prescription pad.

The insistent young man remained standing with his right arm extended...Etiquette prevailed...I was forced to stand up and return his handshake.

"So, how can I help you today?"

Without hesitation, he replied, "Well, I've come about these infected blisters on my hand."

Dr. Lora Morrice, Sidney B.C.

Oops in the OR:

Muriel is one of our OR nurses who rotates...One day following a long morning of assisting our gynecologists in their usual procedures, she was

assigned to a carpal tunnel case...While scrubbing the middle aged male's fingers, she was heard to ask, "Now, spread your legs."

Dr. Edwin Janka, Yarmouth N.S.

CONFERENCE NOTES...

The Schroeder Doctrines...

Case A: Middle aged man with diabetes and hypertension...BP 150/88; FBS 325; creatinine 1.6; BUN 24; 2+ proteinuria; EKG: silent MI; Carotid angiogram; Stress ECHO; lipid panel.

HTN Rx: Use ACE (Lisinopril 5 - 10mg qd) qd or Amlodipine 2.5 - 5mg qd...Don't use bid or tid drugs e.g. Captopril which is tid...target BP 120/80...(Claudication can be an ache in the butt a/c exercise)

Diabetes Rx: Glyburide and Insulin (70 - 30); Follow with HbA1c...(Don't use Glucophage c creatinine 1.6)

Lipid Rx: Use a "statin" eg Lipitor...Target lipid levels: Total cholesterol 150mg and LDL 60 - 80mg

Case B: Elderly white man with Rt carotid bruit, BP 180/70. Studies: carotid ultrasound, lipid panel, EKG: LVH and ↑PR interval...

HTN Rx: Choice of diuretic and CaCB (eg Amlodipine...Avoid betablockers and ACE in elderly.)

* Discussion: 60 - 70% of population over age 70 have ISH (Isolated Systolic Hypertension. (ISH is the most undertreated group) Check serum creatinine and prevent dementia 2° BP Rx...Use CaCB's: (DHP-CCB reduces CVA's and lowers cardiac end point) CaCB are more effective in 65+ pts with ISH.

RX of ISH: Do treadmill and eye exams...Stop smoking (the most cost effective) **Cholesterol goals: TC: 150 & LDL 60 - 80 Treat ISH with CaCB's**...(If pt has erectile dysfunction, offer Viagra (provided they can climb 2 flights of stairs) ED may be 2° to BB and diuretics...or "Fear of failure" The pill is the cheapest part of sexual activity...ie "One hour wait for a five minute ride...")

Case C: 38 yr black man with BP 160/100...Fundus: AV nicking; maximal impulse in 6th i.s. EKG: LVH; Creatinine 1.8...

HTN Rx: Calcium Channel Blockers (**Blacks have high rate of ESRD**) **LVH:** independent risk factor: Combination of CaCB + ACE can reverse LVH

Case D: 60 yr old man with HTN, angina and hyperlipidemia.

Treat hyperlipidemia with Lipitor or Zocor... HTN c Angina: Use CaCB's...CaCB's are antiatherosclerotic viz reduces atherosclerosis...

(John Speer Schroeder...Prof of Medicine, Stanford-Hypertension Symposium at Hawaii Prince May 23...Sponsored by Pfizer)

PEARLS FROM MEDICAL REPORTS...

(*STITCHES...May 99*)

She should continue to wear her tennis elbow...
He hurt his hip, leg and growing area.
He has previously had a stone in his carotid duct.
The CT scan shows an annual disc bulge at L4-5.
In addition to those aforementioned problems, he
has had further surgery by myself.

SCARRY:

"An eight-and-a-half pound daughter came to
frighten the home of Mr. & Mrs. Brown"
(*Greenville Advocate*)

Sounds Like Fun:

"Sunday breakfast meeting has been planned
for the official board of the church with the Rev.
Mr. Blank undressing the group,"
(*Jackson State Times*)

CONFERENCE NOTES

"Type II Diabetes Treatment Strategies: Implications of the UKPDS"

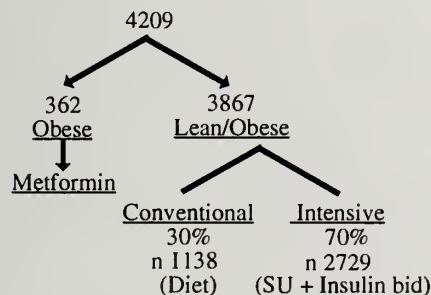
(Visiting Prof Ralph DeFronzo, MD Prof of
Med and Chief Diabetes Div, U of Texas
Health Science Center 7/9/99 QMC Fri Am
Kam Aud)

A. Incidence Type II in US:

6% of population...Cost: \$104 billion/yr (\$1
out of every \$7 health care dollars)

Prevalence: Steady rise (1958 to 1993 stats
esp with aging population)

B. UKPDS (UK Prospective Diabetes Study) 20 yr study: Purpose: Compare Conventional vs Intensive Rx...Goal: Micro vs Macrovascular Complications of Type II

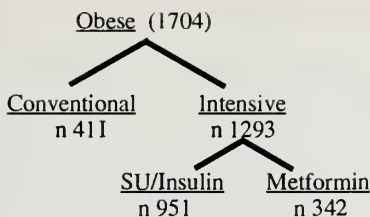


a. Microvascular Complications \bar{c} Intensive Rx: Risk reduction

Microvascular (all)	25%
Retinopathy progressive	21%
Retinal photo coag	29%
Cataract extraction	24%
Micro occlusion	30%
Neuropathy-sensory	40%

b. Macrovascular Complications \bar{c} Intensive Rx: Risk reduction

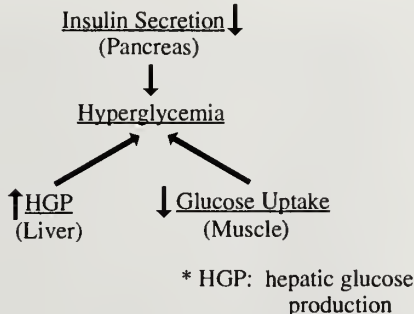
<u>Death</u>	
All causes	6%
Diabetics	10%
<u>Strokes</u>	11%↑
<u>Myocardial Infarction</u>	16%



**** Metaformin Study: Risk reduction

Any DM end point	32%
DM related death	42%
MI/-strokes	39/41%
Microvascular complications	29%

c. Pathogenesis of NIDDM:



Type II: secondary to 2 sets of genes:

- gene lowering insulin production and
- gene causing insulin resistance

d. Goals of Glycemic Control:

Ideal	Accepted	Dx Criteria
FPG <110	<140	<126
PPG <140	<160 - <180	<200
HbA1c <6	<7	_____

e. Management: (Diet + Exercise + Hypoglycemic agents)

In US, only 10% control with diet alone...

1. Diet: "If"

2. Exercise: "If" Original study by Dr. DeFronzo in New Haven...40min 4 times/wk:

70 - 80% maximal oxygen capacity = 8 min
mile...If you cannot lose wtg and exercise, glyce-
mic control cannot be attained...

3. Hypoglycemic Agents:

a) Sulfonylureas: Still the best class of
drugs...They all work...

↓ FPG = 90 - 70mg/dl
↓ HbA1c = 1.5

Mono Rx controls 50 - 70%...5 - 7% failure/
yr

Combination Rx: 30 - 50% reduction

b) Prandin: Less hypoglycemic events...Cost
\$2.50/d...Taken 15 to 30 min ac...

↓ FPG = 60 - 70mg/dl
↓ HbA1c 1.5

	Prandin	Sulfonylurea (SU)
Hypoglycemic Sy's	9.7	20.2
Discontinued	1.4	28
Nocturnal	1.7	

c) Metformin: Mono Rx controls 25 -
30%...Lowers LDL (30 - 40) and triglycerides
(70 - 80)

↓ FPG = 60 - 70mg/dl

↓ HbA1c = 1.5

*CVRF

METFORMIN

*CVRF:
Cardio-
vascular
risk factors

Hyperglycemia ↓
↑ triglycerides ↓
↑ cholesterol ↓
Obesity ↓
Hyperinsulinemia ↓
Insulin resistance ↓
PAI-1 ↓
(150-60%) (8 - 10% of diabetic have ↑PAI)

*Avoid Metformin when serum creatinine is
elevated...

- Start \bar{c} 500mg bid
- Increase 500mg q 2 wks
- Maximum dose: 2 - 2.5gm/d
- Give with largest meal eg lunch or dinner

Obese

Metformin

Lean

SU or Metformin

*Combination Rx: Metformin + SU + NPH 5
units HS (add 5 units/wk)

eg Case \bar{c} FPG > 180

Mono Rx: SU + Met + Bedtime NPH
(38 \pm 9mg/dl)

FPG 118 \pm 5mg/dl; HbA1c < 7.5

d. Thiazolidinediones

- 1) Troglitazone (\$6.00/d) (Liver toxicity)
- 2) Pioglitazone (\$2.75/d) (No liver toxicity)
- 3) Rosiglitazone (\$3.00/d) (No liver toxicity)
- 4) Ciglitazone
- 5) Eglitazone

(Dropped, 2° side effects)

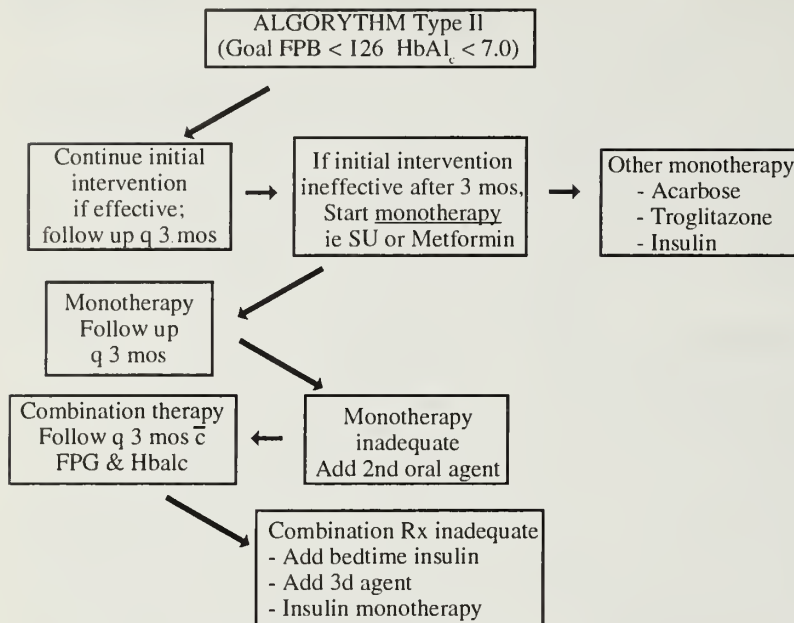
Mean data on Troglitazone: ↓ FPG = 36;
↓ HbA1c 0.4

	SU + Met	SU + Trog
FPG	↓↓ (77mg%)	↓↓ (56mg%)
HbA1c	↓↓ (1.7mg)	↓↓ (1.8mg)
LDL	↓	↓
Trig	↓↓	↓↓
Wtg	↓	↑↑

Acute liver failute: 43 cases

Death	28
Trog related	38
Liver transplant	7
Recovered	5

***FDA recommends Tragliatzone as combination Rx, not as mono Rx...



MEDICAL TID BITS:

The Dec 10 NEJM reported that surgery may be riskier than no treatment for patients with small brain aneurysms. A major study by the National Institute of Health discovered that the danger of rupture of small aneurysms was less than 1/20 of 1% per year...

FDA approved the first at-home-laser for less painful blood tests. Robotics Inc's "Lasette" vaporizes a tiny hole in the finger replacing the lancet. Diabetic experts however warn that the laser may be too expensive for many patients and too bulky to carry around...

Sludge Report: Data on 45,000 men show that 2 or 3 cups of coffee may cut the risk of gall stones by 40%. Researchers think that coffee helps flush out the gall bladder and somehow alter bile fluid...

Researchers have found that girls who are relatively lean at age 10 and those who grow rapidly during adolescence have a significantly increased risk for breast cancer...

Estrogen Reprieve: The jury is still out re HRT and breast cancer risk, but there is some reassurance. A study of 37,000 women found little evidence that estrogen is linked to the common cancers such as ductal carcinoma in situ...but may increase some uncommon forms which are slow growing and easily treatable...

MEDICAL TIDBITS...

Designer Estrogens: A June JAMA report seems to tip the scale in favor of Raloxifene over Tamoxifen...Researchers at UCSF reported that: Raloxifene (3 1/2yr study) reduced breast Ca risk by 75% (in a low risk group) whereas Tamoxifen (4yr study) reduced the risk by 45% (but in a high risk group)...Raloxifene also lowered LDL and

the risk of uterine Ca...(A head to head comparison will become available in 5 years)

(Time Jun 28 '99)

Brain Strain: Researchers injected volunteers with cortisol (stress hormone) and found that those receiving the highest dose for the longest period (4 days) had the most trouble recalling a story that had just been told. Memory was completely restored a week after the injections were stopped.

Mommy Track: Government report

1990: vaginal delivery mom averaged 3.2 hospital days
1995: "Drive-by delivery" average 1.7 days
1999: Average 2.1 days

Got Rhythm? In atrial fibrillation, defibrillators don't do the trick in 20% of cases. A new study shows that defibrillators work in problem cases when the patient is first treated with ibutilide.

POTPOURRI...

(Dr. Daniel Andrew Waterloo, Ont Stitches May '99)

Although chronic pain and headache management is heavy duty, it's not without its lighter moments.

A few weeks ago, I put a lady on a beta blocker for her migraine headaches. I explained to her that I never put men on beta blockers because it causes impotence and decreased libido.

The lady thought for a moment and said, "Would it be O.K. if I give some of these to my husband, for my headaches, Doctor?"

How Reassuring:

(Evelyn Ray Hudson, Fla., Stitches Dec '98)

The idea of cardiac catheterization strikes fear in even the most stoic patients — so in our cardiac

lab we have a repertoire of jokes to lighten the tension eg "Well, we'll have that gall bladder out in no time."

But one patient topped our routine with his story: "I was really scared. The technicians came two hours earlier that I expected. They apologized with the usual excuses and reassured me that I was fortunate to be going first, because I'd get the really clean instruments..."

The Wrong One:

(Dr. Charles Peti, White City Sask.)

A young woman came to our ER complaining of chest pain. By history and physical it was clearly a chest wall pain. After an EKG, I explained the benign nature of the pain and offered her analgesics which she declined. She'd called her minister to attend her in the hospital and wanted to wait for him in the exam room.

A few minutes later, an older priest came through the front door. Seeing his collar, I led him down the hallway into the young woman's room and closed the curtains behind him.

He left the room a few minutes later with a puzzled look. "Who was that young lady?" he asked. "I don't even think she's Catholic. I came to have my sore back looked at. Where do I register?"

Eventually the appropriate minister arrived and I saw the priest for his back pain...

MISCELLANY...

There was once a newspaper headline that read: "SOCIALITE WEDS M.I.T. GRADUATE" The NewYorker quoted the headline and it commented, "Dod'z nize."

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I am from the academy, and I'm here to help you.

PrimeSight was launched three years ago by the American Academy of Ophthalmology as a vision care network. Approximately 5,000 eye surgeons paid \$1,000 each to join the plan. PrimeSight has been slow in moving, and members make two primary complaints. The only deal PrimeSight has completed is with the optical chain Cole Vision, which runs Pearle, Sears and J. C. Penney, encompassing about 40 million plan members. However, reimbursement for those eye exams is below \$45, unacceptable to many, and the M.D.s may not dispense glasses to their patients. Another problem is the language of the provider contract which includes verbiage in PrimeSight's "hold harmless" clause that could force doctors to cover damages and court costs for payers even when the judgement is for the defense. Many consider that the contract imposes an unacceptable level of uninsured liability on the provider. A PrimeSight spokesman maintains that the hold harmless clause is what payors are looking for right now, and that is what it takes to do business. So, low reimbursement, inability to dispense glasses, increased liability risk - it is easy to see why PrimeSight is not prospering.

Trial lawyers react to the smell of money like vultures to a carcass.

Laser refractive surgery has rapidly become one of medicine's most lucrative developments. Success attracts a crowd, and the dominance of Visx, Inc. with their broad patents is now under serious challenge. The original work claimed by Drs. Trokel and L'Esperance is alleged to be flawed. A U.S. Patent Office examiner has rejected a key Visx patent of Dr. Trokel, saying his claimed invention was "obvious" in view of previous discoveries. Additionally, lawyers for Dr. L'Esperance have acknowledged that he submitted a back-dated document to the Patent Office in his claim of discovery. As Emerson noted, "Every hero becomes a bore at last." After all, the chief business of medicine seems to be the setting up of heroes, mainly bogus.

So, if Drs. Trokel, L'Esperance and VISX, Inc. Are not the rightful owners of the excimer patents, who is?

The earliest notes on the excimer date back to 1980 in the records of an Air Force scientist, Dr. John Taboada, at Brooks Air Force Base in San Antonio, Texas. In 1983 he had dinner with Dr. Trokel and outlined his work which showed how the excimer could correct visual defects faster and more safely than surgical blades, but Dr. Taboada never filed for a patent. At about the same time, an IBM Corp. scientist named Rangaswamy Srinivasan was testing the excimer and noticed it caused biological tissue to chemically decompose without causing collateral damage. He stated that IBM had the earliest patent which broadly covered use of the excimer on biological tissue, but did not specifically mention eyes. Now Nidek, Co. has begun selling competing lasers, and has been sued by Visx for patent infringement. Nidek seems to have no fear, and of course, has also filed a suit against Visx. Nidek charges doctors no royalties for use of their laser, and has offered to pay doctors' bills if they are threatened by Visx. In yet another complaint, Visx is being sued by Dr. Taboada, the Air Force physicist, for \$80 million in past royalties. The excimer laser - a mother lode for trial attorneys.

The road to success is always under construction.

The reason all the above is so important is that laser surgery is accelerating in the numbers predicted when the excimer first came on the scene. With 400,000 patients in 1998, laser surgery doubled the 1997 output, and analysts predict that 1999 will double that of 1998. Because the procedure has been limited to population centers, Laser Vision is going mobile. The company will deliver a laser and a technician directly to the eye surgeon's office in order to go into markets that can't support a full-time laser. Doctors previously sitting on the sidelines are entering the field. 87% of the surgeons Laser Vision serves do fewer than 20 procedures a month. The company will provide upkeep for the laser and even assist marketing.

There are many reasons for overpopulation, and sex is all of them.

For nine years the Japanese have been debating the use of oral contraceptives, but have found reasons not to grant approval. Despite the fact that western nations have been using birth-control pills for almost 40 years, the Japanese government used such reasons as vascular problems, and fear of

promiscuity, or the possibility of spreading AIDS, as reasons for denial. Criticism of the government position reached a crescendo when the Health Ministry approved the sexual dysfunction drug Viagra in just six months, but continued to ponder the birth-control pill. Now formal approval of oral contraceptives by the advisory panel is expected by the end of June, and nine drug companies are positioned to jump into the market. Analysts estimate that sales could total between \$800 million to \$1 billion a year.

The man who accuses others, always excuses himself.

After the Littleton, Colorado, high school shooting episode, our Congress demonstrated growing enthusiasm for gun control by voting 78-20 for the mandatory sale of trigger locks with all handguns. How bold, how daring! Amusing, but also tragic that our legislators continue to avoid a serious approach to the social problems related to the shootings. Guns have been part of American life since well before 1776, yet only in the past two decades have the juvenile gun problems surfaced. The IQ challenged bleeding hearts, like Rosie O'Donnell, want to blame guns. The same sort of mentality would blame water for drowning and autos for crashes. Our social scientists must look at what has happened in the minds of children, and in our public schools. Parental apathy, one-parent families and latch-key children, indulgent legal decisions, poor school attendance and poor performance, tolerance of misbehavior, and inability of teachers and administrators to punish or expel miscreants - these are some of the problems which must be addressed. Private schools have no shootings because teachers can communicate with parents, they refuse to tolerate bad student conduct, they insist on discipline and require that students learn. Is this all so difficult for our politicians to acknowledge?

Please support the center for research into the heebie-Jeebies.

An American Bar Association panel is recommending that lawyers be allowed to share fees with other professionals. Citing complexity and competition, the panel said that individual clients more than ever before need coordinated advice from lawyers, financial planners, accountants, social workers and psychologists. Some lawyers were unhappy with the prospect and asked, "How can an accounting firm be subjected to the ethical standards of the legal profession?" Ethics? Lawyers? No mention was made of physicians, but the thought of unscrupulous doctors being tied in with plaintiffs attorneys on contingency fees is frightening.

Did the Mai Tai get its name from two Hawaiians fighting over neckwear?

One of life's real and abiding problems is the food stained necktie. Spaghetti sauce, salad dressing, drops of beverage, all seem to migrate to the necktie and render it obsolete. Dry cleaning leaves a necktie limp and shapeless, so once stained, it is dead. Now the solution has arrived-Teflon necktie. Yes, J. C. Penney now markets a Teflon-coated, stain-resistant, Executive Spotless necktie which is selling like non-stick hot cakes. They don't say Teflon or J. C. Penney, they come in fashionable widths and patterns, and women buyers like them. Should they be named after a President? How do they look with aloha shirts?


Live within your income even if you have to borrow to do it.

If you think you are making less money these days, you are correct. For the fourth year in a row the median income for doctors in the United States has dropped (1.4%), according to a survey by the American Medical Association. Since the major area of decrease has been Medicare reimbursement and so much of eye care is for the elderly, eye surgeons are among the losers, although managed care took the blame for the fall.

ADDENDA

- ❖ In the next seven days, about 800 Americans will be injured by their jewelry.
- ❖ Avoid any restaurant that features Kaopectate on draft.
- ❖ Don't go back-packing with any couple with his and her rectal thermometers.

Aloha and keep the faith —rts ■



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Cover art and descriptive text by Dietrich Varez, Volcano, Hawaii. All rights reserved by the artist.

Ulana

Ulana means to "weave" in Hawaiian. Shown here is a basket being made of pandanus leaves.



Mazie K. Hirono
Lieutenant Governor, State of Hawaii



MESSAGE FROM LIEUTENANT GOVERNOR MAZIE K. HIRONO

**Hawaii Medical Journal
Women's Health Month 1999**

As Honorary Chair of Women's Health Month 1999, I invite you to join me, health care providers across the state, The Department of Health, The Hawaii State Commission on the Status of Women and all our participants in celebrating Women's Health Month this September. Throughout Hawaii numerous events will inform, educate and help to focus public attention on the issues that impact women's health.

This month-long public awareness campaign allows professionals from many fields to share knowledge through interactive, informative and entertaining events. Our goal is to increase understanding of women's health related issues and to provide access to the many resources available. We look forward to further collaboration with all of you.

Mahalo to all the past and present participants for their support of the women of Hawaii. We encourage all of you to become involved in Women's Health Month 1999 and share in this important community effort.

Aloha,

A handwritten signature in cursive script that reads "Mazie K. Hirono". The signature is fluid and elegant, with the first letters of the first and last names being capitalized and prominent.

MAZIE K. HIRONO



*Virginia Morriss Pressler, M.D., M.B.A.
Deputy Director for Health Resources
Hawaii State Department of Health*

**MESSAGE FROM DEPARTMENT OF HEALTH DEPUTY
DIRECTOR
VIRGINIA M. PRESSLER MD, MBA**

Aloha! I am pleased to be participating in this special women's health issue of the Hawaii Medical Journal.

As a surgeon for many years specializing in breast cancer, women's health is a primary concern to me. Women's health is enjoying unprecedented attention and we are beginning to see long overdue improvements. Yet, we still have a long way to go to fully appreciate and improve the entire spectrum of women's health issues. The articles in this issue of the Hawaii Medical Journal highlight just a few of the broad array of issues affecting women's health.

Why is women's health so important? In addition, to having their own unique health needs, women frequently respond differently than men to treatments for health problems which they share with men. Outcomes from medical research on men are not always applicable to women. Also, in spite of the expanding number of career women, women are still the predominant care givers in the family and make eighty percent of the health care decisions in families.

Preventive health has always been important to me. With my new role in the State Department of Health, I am even more aware of the power of preventive health in the overall public health of all of the people of Hawaii. Unhealthy habits and lifestyles account for the majority of health problems which all of you treat every day.

September is Women's Health Month. It is a time for women. It is also a time for physicians and the entire health care industry to recognize the unique health care needs of women and ensure that women have fair and equal access to top quality, affordable health care services. This includes attention to counseling our patients on healthy lifestyles. In spite of the increasing autonomy and empowerment of women, women still respect the advice of their physician. Let us accept the challenge.

Virginia Pressler, M.D.

Virginia Morriss Pressler, M.D., M.B.A.
Deputy Director for Health Resources
Hawaii State Department of Health



Editorial

**Norman Goldstein MD
Editor, Hawaii Medical Journal**

This month — Special Issues on Women's Health – Part II

Five years ago, Hawaii Medical Journal published the first Special Issue on Women's Health (September 1995).

This month, Deborah Goebert MS, writes a review on Male Violence Against Women in Hawaii. This is an appropriate follow-up to the papers by Shay Bintliff MD on Domestic Violence, Identifying Abuse (pages 246-247) and Domestic Violence: A Medical Perspective (pages 242-245) by Julie Owens, Executive Director of HOPE Domestic Violence Consultants.

The paper by Virginia Pressler MD and Lila Johnson RN present an excellent perspective on Women's Health - "A Real Lady Killer."

Finally, the manuscript by Valli Kanuhu PhD is not strictly limited just to women, but discusses the health needs of both lesbians and gay men in Hawaii.

Mahalo to the authors for these important additions to issues dealing with women's health.

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Robert Ricketson, MD
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Neurosurgery

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Straub Care Quantum
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HMAA
Worker's Compensation





Medical School Hotline

The Hyperbaric Treatment Center John A. Burns School of Medicine Frank P. Farm, Jr., Director

The Hyperbaric Treatment Center (HTC) at Kuakini Medical Center is a vital service that meets the needs of SCUBA divers not only in the State of Hawaii but throughout the Pacific. The center is one of the University of Hawaii John A. Burns School of Medicine (JABSOM) direct links to the community which provides essential patient care. HTC also provides training for residents in a unique field of medicine. These residents learn to treat decompression illnesses (DCI) and to administer Hyperbaric Oxygen Treatments (HBO) for a broad range of ailments. HTC not only meets the needs of divers and teaches physicians the clinical skills needed to treat DCI but also offers the Medical School opportunities for research.

Hyperbaric Medicine was first used in the 19th century, when compressed air was used to help facilitate the construction of tunnels and bridge piers. This new technology was later adopted by the medical community to hyperoxygenate the blood. Hyperbaric Oxygen has continued to evolve since the 19th century into a research based tool, not only to treat Decompression Sickness but also for other medical problems.

During the early 1980's the then governor of the State of Hawaii, George Ariyoshi, was notified by the US Navy (USN) that they could no longer provide humanitarian treatment of civilian divers. The Navy had provided this care for divers in the State since the introduction of self contained underwater breathing apparatus (SCUBA) gear in the early 1950's. The Governor identified JABSOM as a source of expert medical advisors and requested that the School provide him with an opinion on the most prudent course of action to provide for care to injured divers.

The Dean of the School of Medicine convened a group of interested faculty members and appointed the Chairman and Professor of Pathology, Dr. John Hardman, to lead the group. The Committee produced an extensive report informally titled as the Hardman Report. It provided recommendations on the establishment of a center, the equipment that should be purchased, and other details. With that effort, the foundation for the involvement of the John A. Burns School of Medicine with the Hyperbaric Treatment Center was established.

The most important and critical contribution that the School of Medicine provided the Hyperbaric Treatment Center was the talent, energy and background in academic diving medicine of Dr. Edward L. Beckman, Professor of Physiology. Dr. Beckman, an ex-Navy Captain, had been involved in diving and aerospace research throughout his entire career. To this day, the HTC utilizes treatment tables developed specifically for divers in Hawaii by Dr. Beckman. He was one of six (6) founding members of the Undersea Medical Society, now known as the Undersea & Hyperbaric Medical Society (UHMS). The UHMS is the professional society of clinicians and research scientists who work and study in the field of diving and hyperbaric medicine.

Dr. Beckman served as HTC's Medical Director and provided the Center with not only his expertise and clinical treatment skills but continued his research, experiments and studies. He established an interest group of faculty members, community physicians, Navy Medical Officers and the HTC Medical Staff named the Research Advisory Committee (later known as the Medical Advisory Committee). Through its quarterly meetings this group provided information on current diving medicine research and clinical cases presented to the HTC. The meeting provided the HTC medical staff experience in the academic and scientific environments. It was an impetus to bring the most talented, interested members of the community together. Dr. Beckman encouraged continually academic curiosity and high research standards.

Dr. Robert Overlock, HTC's current Medical Director, initiated a collaboration with JABSOM's Residency Program to provide all residents

an elective in hyperbaric medicine. This elective permits the residents to join the HTC's staff for one month to study the clinical aspects of diving accident management and hyperbaric oxygen therapy. Since diving is popular year around in Hawaii, the residents are exposed to divers who suffer from DCI. Without this elective, the residents are not likely to be exposed to any type of Hyperbaric Medicine. Many residents come from the mainland to train in an academic and clinical setting that would otherwise not be possible. Through this elective the residents utilize Problem Based Learning (PBL) format.

Dr. Overlock also provides a monthly Diving Medicine course geared mainly for emergency medicine residents and other medical professionals. This course includes an overview of physics, physiology, dive accident management and hyperbaric oxygen therapy (HBO) and provides an overview of how treatment can relieve the symptoms of DCI and how hyperbaric oxygen therapy can be an adjunctive therapy to many health problems. Hyperbaric oxygen therapy is generally approved for select medical indications including: carbon monoxide poisoning, acute smoke inhalation, crush injuries, compartment syndrome, exceptional blood loss, gas gangrene, chronic refractory osteomyelitis, radiation necrosis, prevention of compromised skin grafts, moderate or severe thermal burns and necrotizing fascitis.

Hyperbaric oxygen is 100% oxygen delivered at greater than atmospheric pressure. Except for its proven efficacy in treating DCI, HBO was not taken seriously as a treatment modality until the 1950's. It was then investigated for treatment of carbon monoxide poisoning, support of oxygenation during cardiac surgery, and treatment of anaerobic infections. Today HBO treatments are used as an adjunctive therapy for the various health problems noted above. The beneficial effects of HBO include: stimulating blood vessel growth, reducing edema, and improving the host response to fight infection. Routine HBO treatments last for a total of 2 hours and 8 minutes at a maximum depth of 47 feet. Currently, the HTC at Kuakini administers HBO treatments daily. The usual regimen for a patient is 30 to 60 treatments.

Dr. Overlock comments, "Our treatments work extremely well for the majority of patients referred to us. There are a few whose illness does not respond as well as we would like, but they are in the minority. The best way to find out if HBO treatments will work for an individual is to have your physician call us for a consultation."

DCS or what is commonly known as "the bends" afflicts a small percentage of divers but can be a life threatening illness. When breathing compressed air at depth, divers accumulate excess nitrogen in their body tissues. The normal air mixture is 80 percent nitrogen and 20 percent oxygen. When divers follow the dive tables there is not likely to be any ill effect from the nitrogen build up. Problems occur when safe diving recommendations are overlooked or the individual is predisposed to DCS. The build up of nitrogen produces millions of bubbles in the body's tissues upon ascent. As the diver reaches the surface these bubbles can cause pain and other symptoms. In the serious cases the bubbles can form in the brain or spinal cord and can result in paralysis or even death.

The HTC at Kuakini is the only facility of its kind which utilizes a maximum treatment depth of 280 feet. Through the center's own research, this prescription is suggested as more effective, and produces results more quickly than treatments at other centers. HTC meets the specific needs of Hawaii. Due to the popularity of diving in Hawaii, it is not simply an asset, but a necessity to the Islands. Services are available 24 hours a day seven days a week for any emergency DCS cases. Beyond the HTC's impact upon the Hawaiian Islands, the Center treats patients from the farthest reaches of the Pacific. HTC provides information to the Divers Alert Network (DAN), a national agency for divers, which studies DCS and symptoms to provide an increased knowledge base for all recreational, commercial and Navy divers.

The University of Hawaii JABSOM supports this effort with both the vital connection to talented, academic leaders and an avenue for an organizational structure for further development and provide an essential service to divers on the islands and throughout the Pacific Basin. In return the HTC represents the John A. Burns School of Medicine with a direct link to the community. It also continues the School of Medicine's research mission and serves as a unique and valuable training environment for residents.

Women's Health in Perspective A Real Lady Killer

Virginia M. Pressler MD, MBA and Lila R. Johnson RN, MPH

Millions of dollars are spent each year on research to prevent and treat cardiovascular disease, cancer, and other diseases in order to improve health outcomes for women in the United States. The impact of this research on longevity and quality of life is significant. However, it pales in comparison to the potential impact of a single known preventable cause of most of these diseases - tobacco use. Cigarette smoking is by far the number one preventable cause of death in both men and women. While the death rate for tobacco related disease for men has leveled off, rates among women continue to rise.¹ More than 140,000 women in the United States die each year as a result of smoking related diseases, including cardiovascular disease; lung cancer; chronic lung disease; pancreatic, oral, esophageal, laryngeal, urinary, and cervical cancers; and lower respiratory infections.^{2,3}

Cardiovascular Disease

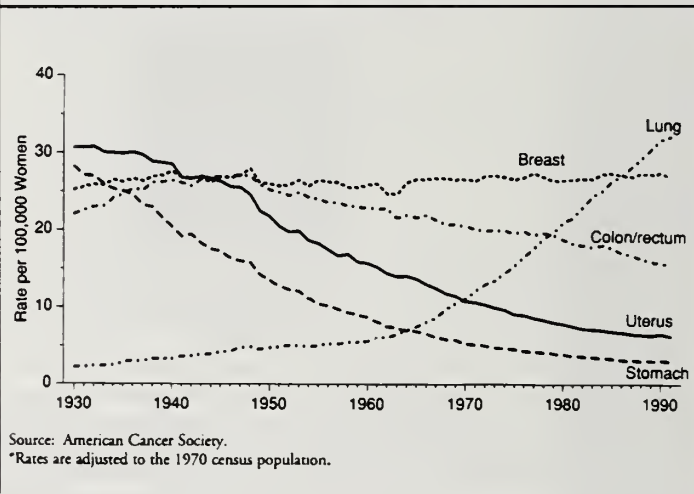
Cardiovascular disease, particularly coronary heart disease and stroke, is the major cause of death among women in the United States and in most developed countries. Cigarette smoking is the leading preventable risk factor for CVD in women, with more than 50% of myocardial infarctions among middle-aged women attributed to tobacco.⁴ Carbon monoxide, which inhibits oxygen transfer to the blood, and nicotine, which increases the heart rate and blood pressure, are just two of the multiple factors in smoking that increase the risk of myocardial infarction. Women smokers who also take oral contraceptives have a 10-fold increased risk of myocardial infarction compared to nonsmoking women.⁵

Cancer

Tobacco use accounts for nearly one third of all cancer deaths, and more than 80% of lung cancer can be directly attributed to cigarette smoking. Between 1960 and 1990, the lung cancer death rate among women increased by more than 500%, and the rate is continuing to rise. While much recent attention and funding have been targeted to

breast cancer, mortality from breast cancer is declining by 1-2% annually. Less known is the alarming fact that lung cancer surpassed breast cancer in 1987 as the number one cause of cancer death in women.⁶ (Figure 1.) The American Cancer Society estimates that in 1999, lung cancer will kill 68,000 women and breast cancer will kill 43,300 women.¹

Figure 1. In 1987 Lung Cancer surpassed Breast Cancer as Number One cause of Cancer Death in Women



Recent studies have discovered an interesting phenomenon demonstrated by an unusual increase in lung adenocarcinoma; nearly 17-fold in women and nearly 10-fold in men. Lung adenocarcinoma has replaced squamous cell carcinoma as the most common histologic subtype of lung cancer. Since such changes in cancer type are rarely observed, scientists have found this perplexing for years. Researchers now attribute this change in histopathology to the manufacturer's modification in cigarette composition and gender selection choices. High-tar, nonfiltered cigarettes, generally preferred by men, are perceived as too toxic and harsh for smokers to inhale deeply. The inhalation of such high-tar cigarettes tends to deposit the carcinogenic agents in the more central regions of the lung leading to the development of squamous cell tumors. In contrast, smokers of filtered low-yield cigarettes (advertised as light, mild, low tar/nicotine, etc.) inhale more deeply and develop adenocarcinomas at the lung's periphery. This hypothesis is offered to explain why women, who have historically smoked filtered low-yield cigarettes, are having a higher prevalence of adenocarcinoma.^{7,8}

Tobacco use is also a major risk factor in cancers of the mouth, throat, esophagus, kidney, pancreas, bladder and cervix.

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Respiratory Diseases

In addition to cancer, tobacco smoking is responsible for non-neoplastic bronchopulmonary disorders and increased frequency of respiratory symptoms and illnesses. The death rate due to chronic obstructive pulmonary disease among women who smoke is also on the rise. Nearly 80% of persons with emphysema are current or former smokers. The prevalence of chronic bronchitis, chronic cough and sputum production varies directly with the number of cigarettes smoked daily.⁹

Environmental tobacco smoke causes lower respiratory tract infections in adult women as well as chronic middle ear disease, reduced lung function, exacerbation of existing asthma, and increased risk of new cases of asthma among children.¹⁰ Every year in the U. S. between 8,000 and 26,000 children are diagnosed with asthma attributed to mothers who smoke at least 10 cigarettes a day. Between 200,000 and 1 million asthmatic children have their condition worsened by exposure to second hand smoke.¹¹

Reproductive Health

Women of reproductive age face increased adverse consequences of smoking. The irony is that smoking rates are highest among women at the height of their childbearing years (age 25-44.) Several epidemiologic studies have suggested that smoking decreases fecundity in women. The probability of conceiving per cycle is reduced by one-third.^{12,13,14} Smoking is further associated with premature menopause. Women smokers experience menopause from one to three years earlier than nonsmokers.^{12,15}

Smoking during pregnancy is causally linked to intrauterine growth retardation, fetal loss, low birthweight infants, respiratory distress syndrome and other respiratory conditions of the newborn, and sudden infant death syndrome (SIDS).^{16,17,18} The risk of SIDS is twice as high for infants born to women who smoked during pregnancy and higher yet among infants exposed to postnatal smoking.¹⁴

Approximately 18%-20% of pregnant women in the United States smoke during pregnancy.¹⁹ Data reveal that although one-third of women who smoke at the beginning of pregnancy will quit smoking for the duration of the pregnancy, 60% of these women relapse within the first 6 months postpartum, and 80%-90% will return to smoking by 12 months postpartum.²⁰ Women who smoke expose their infants to tobacco in the postnatal period. This exposure increases respiratory diseases in newborns, infants, and children. Children of smoking mothers are also more likely to become smokers themselves.²¹

Despite the known health risks, women continue to smoke at high rates. In the United States, 22% of women are smokers.²² In Hawaii, 17% of women over 18 years of age are current smokers,²³ but the statistics for adolescent girls are particularly alarming. Thirty-one percent of high school girls in Hawaii are frequent smokers compared to 27% of high school boys. The level rises to 38% of 12th grade girls who report frequent smoking.²⁴

What can physicians do?

Women initiate smoking for many reasons including social acceptance, body image and weight control. The tobacco industry has done an outstanding job of appealing to the insecurities of adolescence and equating smoking to emancipation, success, beauty, and

Figure 2. Smoking Intervention Model

ASK About Smoking at Every Visit

- ✓ Document by vital signs stamp, progress notes, computerized record, or chart stickers.

ADVISE All Smokers to Quit

- ✓ Advice should be *clear, strong and personalized*.

ASSIST Smokers in Quitting

- ✓ Assess motivation to make a quit attempt:

Ready to Quit Now:

- ✓ Identify *reasons* for wanting to quit.
- ✓ Develop a *quit plan*:
 - set quit date within 2 weeks
 - review previous quit attempts
 - identify smoking triggers and anticipated challenges
 - brainstorm strategies
 - inform family, friends and coworkers
- ✓ Provide *self-help* materials and *referrals*.
- ✓ Encourage *nicotine replacement therapy* (patch, gum, nasal spray, inhaler) or *non-NRT* (bupropion-SR) unless contraindicated.
- ✓ Give *advice* on successful quitting: total abstinence; avoid alcohol; have a plan for dealing with smokers in the house.

Not Ready to Quit Now:

- ✓ Use the 4Rs to enhance motivation to quit:
 - **Relevance-** Provide patient-specific information.
 - **Risks-** Ask Patient to identify the negative consequences of smoking.
 - **Rewards-** Ask patient to identify benefits of quitting.
 - **Repetition-** Repeat every visit.

ARRANGE Follow-up

If Quit (Relapse Prevention):

- ✓ *Congratulate, encourage* maintenance.
- ✓ Review *benefits* from cessation.
- ✓ Review *problems* encountered, offer possible *solutions*.
- ✓ *Anticipate* problems or *threats* to maintenance (weight gain, depression, prolonged withdrawal, lack of support).
- ✓ **Timing:** Contact soon after quit date, preferably during first week, and within first month; further follow-up as needed.

If Quit Attempt unsuccessful:

- ✓ Ask for *recommitment* to total abstinence.
- ✓ Remind patient to use lapse as a *learning experience*.
- ✓ Review *circumstances* that caused lapse.
- ✓ Develop *new plan* with patient.
- ✓ **Timing:** Contact soon after NEW quit date, preferably during first week; further contacts as needed based on new quit plan.

Center for Tobacco Prevention and Control
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other desirable characteristics. Adolescents are unaware that they are being manipulated by the clever and seductive marketing.

Physicians play a key role in affecting smoking behavior. Over 70% of adult female patients want to stop smoking, but only half of them have been urged to quit by their physician or other health care provider.²⁵ Physician advice has been shown to be the most important factor in getting patients to initiate smoking cessation.

Recommendations on smoking cessation from the Agency for Health Care Policy and Research (AHCPR) are summarized in a Smoking Intervention Model (Figure 2.) provided by the Center for Tobacco Prevention and Control, Preventive & Behavioral Medicine at the University of Massachusetts Medical School. Copies of the full report, *Clinical Practice Guideline on Smoking Cessation*, and guideline products are available by calling AHCPR Publications Clearinghouse toll-free at 800-358-9295 or writing: AHCPR Publications Clearinghouse, P.O. Box 8547, Silver Spring, MD 20907.

Pharmacotherapy using nicotine replacement and/or bupropion has expanded effective treatment options for physicians. Combining pharmacotherapy with intensive behavior interventions further increases abstinence rates.²⁶

Physicians who deal with women's health can contribute more to health care outcomes by advising women to stop smoking than by any other single intervention. When we put the entire spectrum of women's health in perspective, tobacco is a real lady killer!

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A Review of Male Violence Against Women in Hawaii

Deborah A. Goebert MS

Abstract

This review attempts to emphasize the urgency in addressing issues of violence against women in Hawaii. It demonstrates that violence against women is a significant, challenging, and often overwhelming and overlooked public health problem. While attention to this problem has dramatically increased, more needs to be done to end violence against women and improve the well-being of women and our society as a whole.

Introduction

Acts of violence are everyday events in the lives of women in Hawaii, impacting all women whether or not they directly experience violence. Violence occurs in the home, at the workplace, and in the community. It is most typically perpetrated by a man known to the woman with at least one in ten women experiencing violence in any given year and as many as four in five women experiencing violence at some time during their lifespan.¹⁻² This equates to one woman every nine seconds. However, these figures are extremely suspect, and most likely conservative, due to the high degree of under-reporting. Violence against women is, therefore, a significant public health issue in Hawaii.

The direct health consequences of violence against women are multiple. Health implications include, but are not limited to, physical injuries, rape, suicide attempts, substance abuse, miscarriage, gynecological symptoms, psychosomatic complaints (head aches, muscle aches, sleep disturbances, and eating disorders), and psychiatric illness. However, these health consequences represent only the most linear effects of violence. Violence against women impacts many other lives. For example, disturbances in social and emotional development, long-term psychological sequelae and an increased propensity for aggression have been identified among children that witness violence.³ Studies also indicate that the abuse of women in the home begins before the abuse of children. As a result of sexual assault, marriages, jobs, and family and social networks may be jeopardized.⁴ Additionally, violence against

women can threaten and shape every woman's life, even when she herself is not a victim.⁵ Its affects can be seen in the choices women make—where they choose or are allowed to work; what events they feel safe attending; when and where they walk; what they say and do at home.

However, it was not until 1971 that research efforts focused on violence against women as distinct from child abuse or psychiatric studies.⁶ Perhaps even more startling is that the United Nations has only recently recognized it as a fundamental abuse of women's rights⁷ and passed the declaration on the elimination of violence against women regardless of custom, tradition or religious consideration.⁸ Women from the Pacific nations were the first to express strong regional concern about violence against women,⁹ stating that fear of male violence is the worst aspect of being female as early as 1988.¹⁰ In Hawaii, early efforts are documented by the first spousal abuse law in 1972 (HRS Section 709-906, Abuse of Family and Household Members). Since then, efforts to prevent and intervene have dramatically increased. However, major gaps remain.

This review article describes the epidemiology of violence against women in Hawaii and the difficulties in estimating the extent of the problem. It also highlights implications and strategies for health care providers.

Epidemiology

Estimates provided in this article are based on local data, when available. However, there are only a few studies that have been conducted locally. This information is accentuated by national and international surveys from populations deemed comparative to Hawaii's based on inclusion of indigenous, immigrant and dominant cultures. Unfortunately, all of these sources provide discrepant estimates. Accurately estimating rates of violence against women is hindered by the lack of data.¹¹ There are no epidemiologic, periodic, nor standardized databases from which to reliably estimate the extent of violence against women.¹² There is sufficient literature to suggest that under-reporting is a problem and, as a result incidence and prevalence estimates are low.^{for examples, see 11, 13-15}

While crime statistics and clinical studies indicate a serious problem, they are gross underestimates when compared with epidemiological surveys.¹⁶ The following information demonstrates that violence against women in the home, the work place and the community clearly poses a serious threat to the health and safety of women in Hawaii, even when glaringly undercounted.

Violence in the Home

The most frequent type of violence against women is abuse of women by their current or former intimate male partners, a form of violence in the home or domestic violence.^{7,17} Estimates of women abused by their partners vary from 10% in the last year to as much

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as 80% over the course of their lifetime.^{2,3,7,12,18} However, Hawaii's lifetime estimate, extrapolated from a Kauai survey, is only 14% with an additional 6% of women who reported the abuse to no one.¹⁹ This seemingly low figure equates to nearly 50,000 women in the State of Hawaii. Additionally, more than one third of women studied stated that they knew someone who had been hit, kicked or beaten up by someone in the household.²⁰ This discrepancy whereby a greater percentage of respondents have personally known an abused woman than admit to being abused themselves has been found in other studies of non-metropolitan areas.^{19,21} It is considered to be a more accurate estimate.

Data from police records provide an even lower estimate of the incidence of violence in the home in Hawaii. There were approximately 7,000 police reports of misdemeanor domestic violence and over 4,000 arrests in Hawaii during 1994.²² Of these, only 3,000 misdemeanor cases and a few hundred of other felony abuse cases were referred to the prosecuting attorneys' offices. The discrepancy between incidents reported to police departments and those referred to prosecuting attorneys' offices discourages women from reporting. While nearly all of the incidents took place in the home, police incident reports reveal that neighbors were most likely to call and report escalating domestic disputes.¹⁵

The majority of women murdered are killed by present or former partners. Locally, from 1989 to 1992, nearly 100 women were killed by men in Hawaii—and most of the killers were partners, family members, or acquaintances.²³ The risk of being killed by one's significant other 1.3 times higher for women than for men. In a similar Hawaii study conducted by the Attorney General's Office using crime statistics from 1985-1994, 29% of all homicides were the result of domestic violence.²⁴ Of these, women were victims in the majority of cases (63%) and men were the offenders in 87% of cases. While the absolute number of murders in Hawaii have remained relatively stable, the percentage of women murders has almost doubled, primarily as a result of spousal homicide.²²

Homicides between intimates, regardless of whether the victim is male or female, are often preceded by a history of physical and emotional abuse directed at women.^{23,25} In most domestic violence situations, the violence increases in both severity and frequency over time. Most victims are killed when they try to flee from their abusers. Of those women killed by their partners in Hawaii, 60% were killed after they had left the relationship.²⁶ When a woman kills her partner, it is usually in self-defense.²⁷

Additionally, violence in the home is often a precipitating factor for suicides and suicide attempts by women. Abuse may be the single most important precipitant for suicide attempts by women yet identified.¹² In Hawaii, partner conflict in the form of verbal or physical abuse preceded most suicide attempts by women.²⁸ Violence, either an actual assault or fear of it, is inferred in many suicides, accounting for 41% of female suicides in Fiji.²⁹ Attempted suicide, particularly repeated attempts, is a sequela of abuse among women that affects one abused woman in ten.¹²

The extent of violence against women in the home can also be estimated from service utilization records. Victim assistance programs in Hawaii provided services for over 6,300 women who were victims of domestic violence in 1994.²⁶ Additionally, the four largest domestic violence shelters provided a safe haven to over 1,400 victims who were forced to flee their homes in order to

survive. Questionnaires were completed by 311 victims of domestic violence that had accessed services around the state in the Statewide Domestic Violence Survey.¹⁹ Respondents reported escalating violence, frequently with more than one type of violence such as beating, sexual assault and/or verbal abuse and the use of a weapon including guns, knives, household object, and vehicles.

Work-related Violence

Violence is pervasive in the workplace. Historically, work-related violence has been narrowly defined to include only physical assault and homicide that occurs at the workplace and that is associated with work activities.³⁰ Recently, the definition has been broadened to include forms of aggression such as verbal threats, abuse, harassment and any assault or threat that produces psychological harm. Although reporting to the Hawaii Department of Labor is required by OSHA standards, there are no published documents with local data for violence against women in workplace.

Homicides are a major cause of death among workers. However, only 6% of all people killed at work are females.³¹ While the overall occupational injury death rate for men is 12 times higher than the rate for women (9.9 versus 0.8 per 100,000 workers), the male to female ratio of occupational death rates is the lowest for homicide at only 3 to 1. Among women, the leading cause death in the work place is murder, accounting for 40%.

The impact and cost of work place homicide are far outweighed by the prevalence of physical assaults, abusive behavior and threats of violence at work, much of which remains unreported and unrecognized.³² While few studies have documented non-fatal events associated with physical assault, their findings are consistent. Unlike workplace homicides, the majority of non-fatal assaults that involved lost time from work occurred to women.³³⁻³⁴ Women had an assault rate of nearly twice that of men (51 versus 26 per 100,000 workers), with the highest assault rates among those employed in health and social services.

Sexual assault in the workplace has not been well studied. Utilizing workers compensation claims from Washington State from 1980-1989, 63 cases of work-related sexual assault were identified during this period.³⁵ The occupations of sexual assault victims were similar to occupations identified for other intentional injuries, primarily health and social services, and the incidents were characterized by isolation from the public and coworkers.

A considerable proportion of threats and harassment in the workplace are perpetrated by co-workers and supervisors (37% and 86%, respectively).³⁰ Data from a nationwide survey using a random, representative sample of 600 civilian workers shows that 19% of respondents reported being harassed in the last 12 months, 10% reported being afraid of becoming a victim and 13% reported having been threatened in the past five years while on the job. While there were no difference in fear and threats between men and women in the workplace, women were more than 1.7 times more likely to report being victims of harassment than men. Harassment was more prevalent when workers reported low levels of group harmony and co-worker support and increased layoffs in the organization.

Violence Against Women in the Community

Women in Hawaii are increasingly at risk from violent and abusive behavior.²³ A 1997 crime victim study by the Department

of the Attorney General indicates that the average crime victim in this state is female, under age 45, and living on Oahu.³⁶ This annual survey found that 10.1 % of women in Hawaii, or nearly 50,000 women, reported being victims of violent crimes. Sixty-six percent of these violent attacks were committed by a person well-known to them and 25% by strangers or casual acquaintances. (The remaining 17% is committed by a family member and constitutes violence in the home.) Less than 1% of women were assaulted with a weapon and 2.1% of women had been beaten. Women were more likely than men to be beaten (60.0% versus 40.0%).

Two percent of women were forced to have sex in the last year.³⁶ In fact, rape and sexual assault are the only violent crimes in Hawaii that have increased over the past few years. Rape is considered by the FBI to be the second most serious crime, following murder. Only 37.5% of those arrested for rape were convicted for felony sex offenses.³⁷ The majority of assaults that lead to an arrest take place between victims and alleged offenders who are either acquaintances or members of the same family. Generally, these assaults occur in private residences (59.7%), although not necessarily the victim's home (32.1%). Approximately 90% of victims were female. These findings are similar to other research that reports more than 90% of adult rape victims are women and 78% of child sexual abuse involves girls.³⁸

A University of Hawaii study found that one out of every three female students identified themselves as having been victims of sexual or attempted sexual assault.²³ Thirty-five percent of males responding to different survey at the University of Hawaii admitted to committing acts which are legally classified as sexual assault. The Honolulu Police Department reported the majority of calls regarding sexual assault on Oahu come from the University area.³⁹ A similar study of college women in New Zealand found that 25% had been victims of rape or attempted rape.⁴⁰

Health Care Interventions

Utilization of services by women who are victims of violence appears to be high. Given the breadth and magnitude of health effects, it is not surprising that between 22% and 54% of all visits to the hospital emergency departments are estimated to be made by victims of emotional or physical abuse.⁴⁵⁻⁴⁷ A recent study among women seeking routine care in a Native American health care facility found similar rates.⁴⁸ While women seek help for as few as one in five assaults, between 40% and 80% of all victims of violence are likely to turn to health workers for assistance at some stage.^{12,49-50} In a national study, 68% of women who experienced severe violence had sought help at least once.⁵¹ In a more recent study, Hutchinson and Hirschel found that 98% of abused women interviewed had sought help from formal sources and 65% seeking some kind of social assistance.⁵²

Yet only 5% of all battered women who seek medical care are identified.^{23,38} Rodriguez and colleagues conducted a qualitative study of abused Latina and Asian women examining barriers to discussing abuse with health care providers.⁵³ Several participants discussed the difficulty of disclosing abuse and asking for help, particularly where providers did not bring up the topic. Participants expressed a desire and expectation for providers to initiate discussions about abuse. Participants also indicated that they would be more willing to get help from their primary care physician, gynecologist or pediatrician.

These findings suggest that women are not only willing to seek help for abuse but frequently do seek help for abuse. The onus is placed on the provider to ask personal questions. However, the role of the provider represents only one of many barriers to help seeking behaviors for abuse.

There are many reasons women do not report their experiences to police or health care providers.³⁸ Victims of violence are stigmatized, thus, by acknowledging their status, they incur some level of devaluation. Qualitative research on women that are abused has found that women are often reluctant to identify themselves because they feel ashamed.⁴¹ Additionally, female victims of violence are seen as instigators or even participants in crime unless strong resistance in the form of serious physical injury can be demonstrated. The two leading problems with the system reported by female victims surveyed in Hawaii were "people made me feel like it was my fault" and "people made me feel like they didn't believe me".¹⁹ The social consequences of help seeking may be one reason that women are also likely to refrain from mentioning the cause of their injuries.⁴²

The reporting behavior of victims has a number of important health implications. Women who do not report violence may not be notified about nor qualify for public-supported health care.⁴³ Women that present with multiple injuries to health care providers and are not identified as victims of violence may fail to receive appropriate treatment for the nonphysical effects of these events.⁴² Psychological abuse is likely to be much more prevalent and less likely to be identified.⁴⁴ Additionally, public funding for services is based on incidence estimates from reporting. There are numerous examples that demonstrate an incongruence between reporting and need for services. For example, funding for shelter in Hawaii are based on incidence estimates using police and survey data. However, Hawaii has insufficient shelter space.¹⁹ As new shelters open or existing shelters expand, they soon fill to maximum capacity.

There is a proliferation of literature on recommendations for improving detection and screening of violence against women, providing training protocols and instruments.^{for examples see 17, 49, 54} McCleer and Anwar found that, after staff training and the introduction of an identification protocol, the percentage of women identified as being battered in the emergency department increased nearly six-fold from 5.6% to 30%.⁵⁵ Yet the implementation of hospital and medical protocol for victims of domestic and sexual violence in Hawaii are inconsistent at best.⁵⁶ Few personnel are appropriately trained and available to properly interact with victims in need of medical care or to conduct forensic exams. This is particularly true for the neighbor islands. Additionally, protocols have primarily been developed for emergency departments. In the Kauai study, 59% of women reported they would seek help from an agency if beaten or sexually abused but only four percent of injured women reported seeking treatment in the emergency department after such an incident.²⁰ All providers need to be prepared to interact with patients that have been victims of violence.^{49,57}

Conclusion

Violence against women is endemic. Acts of violence are everyday events in the lives of women, impacting all women whether or not they directly experience violence. Violence against women is occurring in the home, at the workplace and in the community. This

wide-spread problem has serious and long-term consequences for women, their children and families and their communities. Health care workers are often reluctant or even prepared to become involved in cases of violence against women. Providers must become trained and comfortable asking stressful and personal questions in a nonjudgemental manner. Health care workers have an obligation to identify, treat and provide appropriate resources to victims of violence.

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Non-Competition and Restrictive Covenants in the Practice of Medicine: Has Their Time Passed?

Notwithstanding the fact that the A.M.A.'s Counsel on Ethical and Judicial Affairs discourages any agreement which, upon the termination of employment, restricts the right of a physician to practice medicine within a specified time period and/or geographic area, non-competition clauses and restrictive covenants can still be found in some physician employment agreements in Hawaii. Whether such covenants are legally enforceable in Hawaii is often uncertain. The answer may depend on a case-by-case analysis of multiple factual considerations. Any analysis is made difficult by the absence of any clear legal guidelines or bright-line tests. The following is a brief synopsis and discussion of factors which can be relevant to the issue.

The enforceability of restrictive covenants in physician employment agreements varies widely from state to state. The courts in some states, such as Massachusetts, reject outright any attempt to restrict a physician's ability to practice medicine upon the termination of an employment agreement. They view such restrictions as impermissible restraints on trade. Courts in other states engage in a case-by-case balancing of a number of factors in order to determine the reasonableness (and therefore the enforceability) of the actual restrictions, often coupled with a consideration whether the particular covenant is reasonable in light of the business activity of the employer and physician.

Typically restrictive covenants in physician employment agreements contain temporal and/or geographic competition limitations. As a general rule, the longer the time period of the limitation, the less likely its enforceability. There is some thinking that any covenant not to compete which exceeds two years might be automatically unenforceable, although there is no hard and fast rule in Hawaii.

Geographic restrictions on practice are more problematic. Often a restrictive covenant contains a "radius" clause stating that the departing physician may not practice within a five, ten or twenty mile radius of the former employer. Courts have struggled with what a "radius" means and how a "radius" distance should be measured. Some courts have been particularly reluctant to enforce "radius" clauses which aren't supported by any legitimate business interest of the employer. For example, assume the (a) a physician currently employed in Kailua wishes to leave his employer and practice in downtown Honolulu, (b) the physician is subject to a restrictive covenant with a ten mile "radius" clause, (c) the physician desires to start a new practice in downtown Honolulu, and (d) the distance from downtown to Kailua is slightly less than ten miles. At first glance, the chances of the physician avoiding the restrictive covenant might appear slim. However, if it is further assumed that (a) the bulk of the patients treated at the employer's facility in Kailua reside within five miles of the facility, and (b) the bulk of the Kailua patient population receive their medical care in Kailua, then the physician might be able to successfully attach the ten-mile "radius" clause as overly broad, having no rational relationship to the protection of the employer's actual market area, and therefore constituting an impermissible restraint. Note: the fact that the employer markets its medical services within the entire designated radius does not necessarily mean that the employer is entitled to an enforcement of the covenant within the entire area.

Some restrictive covenants also contain what are commonly called "liquidated damages" clauses. For example, a physician's employment agreement may specify that, if the physician decides that he/she will "test" the enforceability of the restrictive covenant by competing within the prohibited radius during the prohibited time period, then the physician must pay to the employer a specified sum. Such "liquidated damages" are inserted into employment agreements by employers hoping to avoid the difficulty inherent in proving the amount of actual damages sustained as a result of the departed physician's competition within the restricted radius and time period. As a general rule, in order to be enforceable, the stated amount of "liquidated damages" must constitute a reasonable estimation of the actual damages that the employer would be expected to sustain as a result of the departing physician's competing practice, as judged at the time when the employment agreement was made. Conversely, if the stated amount of "liquidated damages" is either exorbitant or lacking in any rationale basis,

the employer is exposed to the argument that the "liquidated damages" were in excess of any reasonable estimation of actual damages and/or speculative in nature and therefore unenforceable.

Some courts have questioned whether the literal enforcement of a restrictive covenant might actually work an undue hardship on the physician. For instance, some courts have balanced an employer's right to enforce a contractual agreement against the fact that (a) a "radius" clause might effectively preclude the departing physician from using a hospital which contains certain equipment of facilities necessary for the safe practice of his specialty, or (b) a lack of patient base outside the prohibited area might effectively deprive the physician of an opportunity to make a living. In essence, any potential harm to the employer brought about by the new "competition" is weighed against any burden placed on the physician in adhering to the terms of the restrictive covenant.

In order to be enforceable, covenants not to compete must also be supported by valid consideration. Where a physician sells his practice, receiving money and an employment agreement from buyer in return, most courts assume that the consideration test has been met. However, where a fixed period of employment is not stated in the employment agreement, where the employment agreement can be terminated without cause, or where a restrictive covenant has been forced upon a physician as a condition of employment after the commencement of employment, it has been held on occasion that there is no valid consideration to support the restrictive covenant and it is therefore unenforceable.

A few courts have shown a willingness to essentially rewrite non-competition agreements so as to make them reasonable in time and geographic scope. However, upon a finding of unreasonableness, most courts have simply declared the covenant in question null and void. Recently, the New Hampshire Supreme Court ruled that physician covenants not to compete apply only with respect to patients treated by the physician when he was under the employment, but do not apply to new patients treated for the first time after the physician's independent practice is established.

Another potential (and sometimes controversial) consideration is whether enforcement of the particular restrictive covenant might run counter to the best interests of the patients in the affected community. When the "public interest" becomes part of the equation, the scope of the analysis broadens substantially, factors such as the concentration of physicians in particular geographic area and the demand for service in a particular specialty area of practice become potentially relevant.

Finally, in defending an employer's attempt to enforce a restrictive covenant, the departing physician may be able to successfully assert that the employer made material misrepresentations in connection with the formation of the employment agreement, thus excusing any obligation of the physician to comply with the terms of the restrictive covenant contained in the agreement. Potential grounds for such defense include an employer's misrepresentation as to (a) the conditions of employment, (b) the employer's financial position, and/or (c) the physician's potential or projected income.

In summary, physician non-competition agreements and restrictive covenants are generally controversial and subject to close scrutiny by the courts. How individual agreements and covenants will be interpreted in Hawaii courts, and whether they will be literally enforced, remains to be seen. Any physician interested in challenging the enforceability of a restrictive covenant should understand that the issues involved are often complex and the outcome may be unpredictable. In such an important area, where a physician's livelihood is directly impacted, any challenge to a restrictive covenant or a non-competition clause should be preceded by a careful legal and factual analysis.

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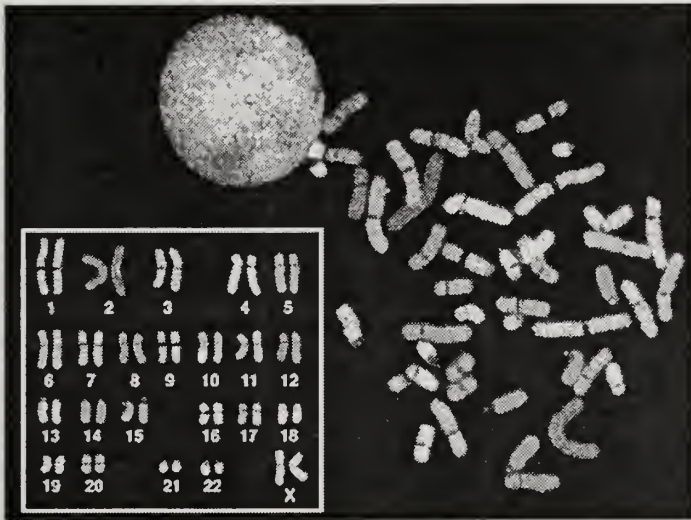
The Queen's Medical Center

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Benchmark

Genetics: The Future of Medicine



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Certified Genetic Counselor

Genetic disease was once thought to be limited to a few rare pediatric conditions. It is now known to affect everyone. After years of promise, the field of genetics is finally coming to fruition and will increasingly impact the delivery of health care services. Every disease has, in addition to environmental influences, genetic components that collectively determine (1) the likelihood of a specific disease; (2) age of onset; and (3) severity. While the "single gene defect" model of inherited disorders was instrumental in developing our understanding of genetic disease, it clearly is insufficient to explain the more complex inheritance patterns of more common diseases. It is our basic understanding of genetics, along with technological advances, that has allowed us to begin

to fulfill our quest for better detection and treatment of disease.

We are increasing our ability to predict who will develop cancer, heart disease, diabetes and Alzheimer's disease, and assist in prevention.

Reflecting back on our ancestors in the early 1900's when the major cause of death was infectious disease,

we can see parallels with genetic diagnosis as we enter the 21st century. Understanding genetic mechanisms helps us to appreciate patterns of disease and how these patterns relate to our current medical dilemmas.

The causes of human morbidity and mortality have changed with the times. Evolution has allowed for the "survival of the fittest" through adaptation of our genes to an ever changing environment. Unfortunately, it takes many generations before we appreciate the benefit of gene alterations, and many more to rid ourselves of altered genes that no longer provide a survival advantage. Every individual carries four to five potentially deleterious genes related to our ethnic background and ancestral environment. We now have the ability to identify many of these gene alterations. Our understanding of gene function and interaction with other genes, as well as our environment, has led us toward a clearer appreciation of the physiological disease process.

An example of adaptation is *thalassemia*. This is a recessively inherited
(Continued on page 2.)

Incidence of Genetic Disease

DISORDERS	ETHNICITIES	CARRIER FREQUENCY	FREQUENCY OF DISORDER
Traditional (purely genetic)			
Chromosome anomalies	All	1/50	1/200
Inborn errors of metabolism	All	1/50	1/1000
New (hereditary predisposition)			
Hereditary Hemochromatosis	N European	1/8	1/200
	Irish	1/4	1/64
Venous Thrombosis	Caucasians	1/12	1/1000
Thalassemia	Chinese/SE Asians	1/10	1/400
Hyperlipidemia	All	?	1/100?
Hereditary Cancer	Ashkenazi Jews	1/11	?
	All others	1/100	?

Identification of hereditary predispositions can enhance medical management and lead to prevention and early detection of disease.

Genetics: The Future of Medicine

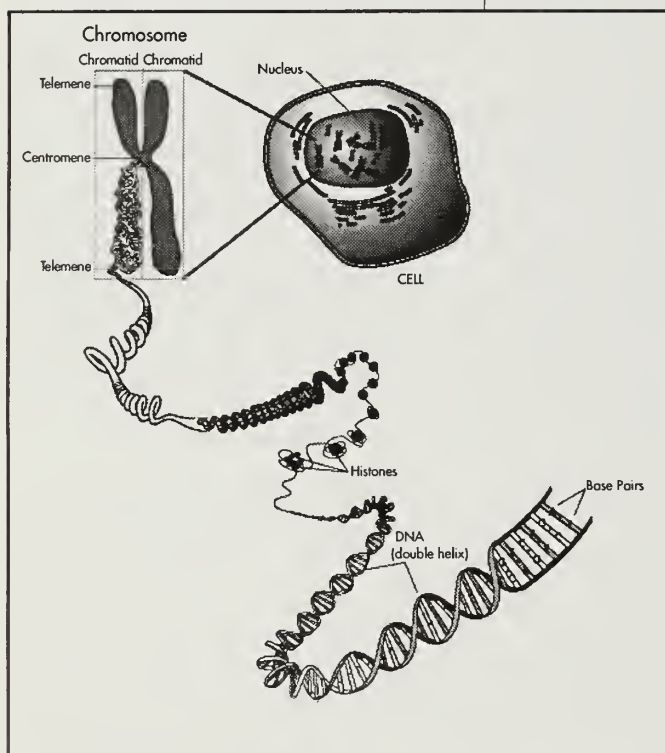
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form of anemia which affords carriers improved survival (fitness) against malaria. This disease is caused by abnormalities in the beta and alpha globin genes leading to a quicker turnover of red blood cells, thus preventing the normal life-cycle of the malaria parasite. Populations from Southern China, Southeast Asia, the Philippines and the Mediterranean (all malaria endemic regions), exhibit carrier frequencies of 1/10-1/20. Although the mutation has improved survival of these ethnic groups, in today's environment, the mutation can be detrimen-

Genetics as a Partner in Patient Care

TRADITIONAL	NEW	NEAR FUTURE
Diagnosis of:	Risk Assessment & Risk Reduction	Risk Assessment, Prevention, Treatment
Congenital Anomalies Metabolic Disease Mental Retardation Sensory Deficits: ie. Blindness, Deafness Specific Ethnic Disease: ie. Thalassemia, Cystic Fibrosis	Preconceptual: Carrier Testing Cancer: Breast, Ovarian, Colorectal, Medullary Thyroid Neurodegenerative Disease: Huntington, Muscular Dystrophies, Sensory Neuropathies Cardiovascular: Premature TIA, Stroke, MI, Venous Thrombosis, Hyperlipidemia Hemochromatosis	Preconceptual: Preimplantation Diagnosis Cancer: Prostate, Lung Neurodegenerative dx: Alzheimer's, Parkinson's Adult Onset Disease: Diabetes, Osteoporosis Pharmacogenetics

The role of genetics has expanded from diagnosis of rare disorders to pre-symptomatic diagnosis of common adult onset diseases. Genetic risk assessment allows for tailored medical management cost effectively reducing the morbidity and mortality from target diseases.



tal. A carrier couple has a 25% chance with each pregnancy of having a child with either transfusion dependent anemia (in the case of *beta thalassemia* major), or a fetal or neonatal demise as the result of non-immune hydrops (*alpha thalassemia*). Individuals living in malaria-free climates are now hampered by this mutation with increasing frequency. Identification of carriers allows tailored medical care, including

reproductive options.

Populations originating from the Celts and Nordics are at a higher risk of developing iron overload as a result of *hereditary hemochromatosis* (HH). The HFE gene controls iron absorption through the duodenum. Carriers of a specific gene mutation absorb excess iron. In times of poor diet, obstetrical complications and bloody battle, individuals with HH were afforded a survival (fitness) advantage. In modern times with increasing longevity, reduction of obstetrical complications, war and improved diet, the morbidity of this disorder is evident. Iron deposits in the heart, pancreas, liver and testis can cause diabetes, cirrhosis, heart failure and impotence. Symptoms typically appear in males after the age of 40. Females exhibit later onset because of menstruation. If the disease is presymptomatically diagnosed prior to organ damage, therapy through phlebotomy can be life-saving. Population

studies have estimated the carrier frequency in the Caucasian population as 1/8 with a disease frequency of 1/200 with ranges from 1/65 in the Irish to 1/500 in the Spanish.

Gene mutations causing thrombophyllas provided an advantage against excessive blood loss. Today 50% of *venous thrombosis* cases have an identified genetic basis. It is estimated that 6-8% of Caucasians carry at least one predisposing genetic risk factor for *venous thrombosis*. Identification of these individuals allows for prophylaxis in high risk situations (pregnancy, surgery, prolonged immobility) as well as avoidance of exacerbating agents such as oral contraceptives.

In each population, there is at least one major gene mutation which predisposes to disease. These mutations have become increasingly prevalent as carriers survive and reproduce. As death rates from infectious disease has decreased, we have observed an increase in genetic disease.

Currently, *cancer* affects 35-50% of the population. Genetic risk assessment provides guidance for cost-effective medical management, decreasing morbidity and mortality.

Hematologic disorders, such as thalassemia and hemochromatosis, affect 10-20% (carrier frequencies) of the population in Hawai'i.

Prenatal Diagnosis Time Line

PAST → PRESENT → NEAR FUTURE

<p>Routine prenatal care identified maternal conditions such as syphilis or Rh Factor incompatibility.</p> <p>No reliable diagnostic or treatment techniques available prior to the 1960s.</p>	<p>Preconceptual Carrier Testing</p> <p>Maternal Serum Screening</p> <p>Ultrasound</p> <p>Amniocentesis</p> <p>Chorionic Villus Sampling</p> <p>Chromosome Analysis for Aneuploidies</p> <p>DNA Carrier Testing and Diagnosis for Specific Diseases</p> <p>Pre-implantation Diagnosis</p>	<p>Isolation of Fetal DNA and Cells in Maternal Circulation</p> <p>Gamete Selection</p>
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Prenatal Prevention and Treatment of Anomalies

PAST → PRESENT → NEAR FUTURE

<p>Avoiding Pregnancy</p> <p>Antibiotic Treatment of Infectious Diseases</p>	<p>Preconceptual Supplementation e.g. Folic Acid</p> <p>Management of Maternal Conditions e.g. Diabetes, Seizure Disorders, Thrombophilia</p> <p>Preconceptual Carrier Screening e.g. Cystic Fibrosis, Thalassemia</p> <p>Intrauterine Fetal Transfusions</p>	<p>Fetal Surgery</p> <p>Fetal Gene Therapy</p>
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Prenatal diagnosis and genetic counseling are currently available at The Queen's Medical Center.

Cardiovascular disease is becoming amenable to risk assessment and genetic testing, and predisposition to diabetes is forthcoming.

Neuropreventive strategies are in the making for neurodegenerative diseases for which genetic testing is already available. It is expected that similar pathological mechanisms exist for a variety of these disorders, raising hope that there will be neuroprevention for common diseases such as Alzheimer's and Parkinson's.

Current genetic services can reduce the morbidity and mortality from diseases and conditions with a genetic component. This is accomplished by working with health care providers to assess genetic risk, diagnose and appropriately manage individuals and their families.

The Future of Medical Genetics

We can now appreciate our differences.

Some of us are (1) sensitive to certain drugs; (2) prone to allergies; or are (3) subject to behavioral difficulties. We know that many genes have an additive effect on our health and we are now for the first time able to ascertain these differences on a molecular level. The amount of this information however, is overwhelming. We currently have the resources to understand, detect and predict many genetic traits and diseases. However, we are currently limited to those which are influenced by only a handful of genes apiece.

Breakthroughs in technology, brought about by the Human Genome Project, permits us to handle large amounts of data. This new field of "informatics" will enable us to determine (1) whether a drug has adverse effects on a patient; (2) what therapies will likely be most successful for a patient with a specific disease; (3) the identity of high-risk diseases and; (4)

the identity of low-risk diseases for that patient.

Integration of Genetic Services into Routine Patient Care

The effective delivery of genetic services requires integration with existing services, thereby enhancing medical care. The Queen's Medical Center has long recognized the importance of integrating modern Genetics services with clinical medicine. As of May 1st, The Queen's Medical Center has brought together clinical specialists to expand services in a much needed niche for the State of Hawaii and the Pacific Basin. The Queen's Comprehensive Genetics Center is available to help physicians in identifying patients who are at high-risk for a wide variety of disorders with genetic components. Specifically, the Center can help to (1) identify patients who would benefit from genetic counseling and/or testing; (2) determine if clinical tests are available for a condition with a genetic component; (3) provide genetic testing for disorders that are common in the population of Hawaii; (4) identify laboratories that can provide testing for other genetic disorders; and (5) interpret test results so that a physician and/or patient can adequately understand them to make meaningful and helpful decisions regarding their health care.

The Queen's Genetics Center is a part of Business Planning and Development Department under Dan Jessonp, Vice President. Plans to expand services to include addition of a full-service genetics laboratory. We have realized that we are moving from the identification/treatment stage to the prediction/prevention/cure endpoint. Application of individual genotypes will revolutionize health care. We will all benefit from increased efficiency and reduced pain and suffering from diseases with a genetic component.

The Queen's Genetics Center is a family-centered organization committed to the prevention, diagnosis, treatment and management of conditions with a genetic component. The foundation of our care is offered in the spirit of aloha as guided by the mission and ideals of our founders.

Genetics Center Professional Staff

Berkley Powell, MD **Medical Director**

Medical Director for The Queen's Genetics Center, Dr. Powell provides a genetics diagnostic service. Dr. Powell received his MD from the Medical College of Virginia in 1973, subsequently completing his Pediatric and Genetics residency at Oregon Health Sciences University. He is Board Certified in Clinical Genetics by the American Board of Medical Genetics and has practiced at the University of Nevada School of Medicine and Kapiolani Medical Center. In addition to being on staff at The Queen's Medical Center, he is also an Associate Professor of Pediatrics, Genetics and Cell and Molecular Biology at the John A. Burns School of Medicine. He is involved in several on-going clinical research projects and lectures frequently in the community on genetic topics.

Mark Bogart, PhD **Cytogenetics Laboratory Director**

Dr. Bogart will direct the future cytogenetics laboratory, primarily providing prenatal, pediatric and cancer chromosome analysis. He received his PhD in Biology from San Diego State University in 1988 and went on to a two-year fellowship in Human Genetics at The University of California, San Diego. He is Board Certified in Clinical Cytogenetics by the American Board of Medical Genetics. Dr. Bogart was Assistant Director of Cytogenetics at UCSD, and for the past five years, has served as Director of Mid-Pacific Genetics. In the near future, he will be employed by Queen's as Cytogenetics Laboratory Director.

Timothy Donlon, PhD **Molecular Genetics Laboratory Director**

Dr. Donlon is responsible for developing and directing the future Molecular Genetics Laboratory providing DNA analysis for prognostic and diagnostic purposes. He received his PhD in Medical Genetics from Oregon Health Sciences University in 1984 and did a

two-year Human Genetics fellowship at Boston Children's Hospital. Dr. Donlon is one of a few individuals internationally that is certified in PhD Medical Genetics, Clinical Molecular Genetics and Clinical Cytogenetics by the American Board of Medical Genetics. He founded and directed the Molecular and Cytogenetics Laboratory at Stanford Medical Center and directed the laboratory at Kapiolani Medical Center. He is Chairman of chromosome 15 for the Human Genome Organization and Associate Professor of Genetics and Cell & Molecular Biology at The Cancer Research Center, the University of Hawaii. Dr. Donlon is also an Associate Researcher at the Center.

Deborah Schmidt, MS, RN **Advanced Practice Genetics Nurse,** **Coordinator of Reproductive Genetics**

Ms. Schmidt provides general genetic counseling specializing in Reproductive Genetics. She received her diploma in nursing from the Buffalo General Hospital School of Nursing. She earned her BSN from Incarnate Word College and her MS in nursing from Texas Woman's University. Ms. Schmidt has worked in nursing for 26 years including 11 years in the field of genetics. She was the program coordinator for the Baylor College of Medicine Prenatal Screening Program prior to moving to Hawaii. An Associate Clinical Professor at the University of Hawaii School of Nursing, she has provided prenatal, pediatric and adult genetic counseling at Queen's for the past 6 years.

Susan Seto Donlon, MS, **Certified Genetic Counselor,** **Coordinator of Adult Genetic Services**

Ms. Donlon provides general genetic counseling and risk assessment, specializing in adult onset disease. She received her Masters in Genetic Counseling from the University of California at Berkeley in 1986. Since that time, she has coordinated genetics

clinics and provided prenatal, pediatric and adult genetic counseling at the University of California, San Francisco Stanford Medical Center and Kapiolani Medical Center. She is Board Certified in Genetic Counseling by the American Board of Medical Genetics and the American Board of Genetic Counseling. Ms. Donlon is on staff at The Queen's Medical Center and is a referral source for The National Cancer Institute and an American Society of Clinical Oncologists (ASCO) Trainer.

Janet Brumblay MS, RN **Advanced Practice Genetics Nurse,** **Coordinator of Pediatric Genetics**

Ms. Brumblay earned her BS in Nursing and her MS in Genetics from University of Hawaii. For the past five years, she served as office manager and case coordinator for Pediatric and Adult Genetics at Kapiolani Medical Center. Ms. Brumblay, who also has a social work background, serves as case coordinator for diagnostic services and will assist patients in obtaining necessary genetic testing and follow-up medical services in the community. In addition to being on staff at Queen's, she is a PhD candidate in genetics at the University of Hawaii.

Benchmark

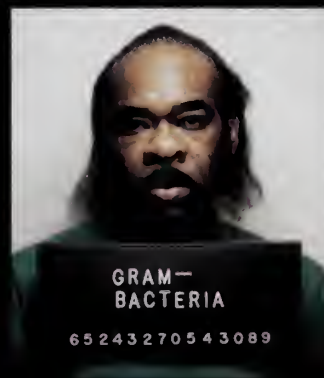
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For more information about
clinical genetics, please call the
Queen's Genetics Center at 537-7633.

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THE QUEEN'S
MEDICAL CENTER



GIVE REPEAT OFFENDERS THE DEATH PENALTY.

LOPROX (CICLOPIROX) REDEFINES THE SCOPE OF BROAD-SPECTRUM TOPICAL ANTI-FUNGAL TREATMENT.

Its unique mode of action makes LOPROX effective against a wide range of cutaneous mycoses¹. LOPROX has demonstrated activity against both dermatophytes and yeasts¹ as well as the proliferative and nonproliferative phases of fungal organisms². This sporidicidal activity may reduce the possibility of recurrent infection.³⁻⁶ LOPROX is active against both gram-positive and gram-negative bacteria, making it ideally suited for mixed infections. In addition, LOPROX has anti-inflammatory activity equivalent to a mild steroid⁷.

So, you have a choice. You can either let cutaneous mycoses off lightly. Or, you can prescribe LOPROX and send them to their death.

The incidence of adverse reactions with LOPROX Cream and Lotion was low. Reactions included pruritis and burning at the site of application. See full prescribing information for further information.

LOPROX[®]
(ciclopirox) Cream or Lotion

MEDICIS
The Dermatology Company[®]

LOPROX[®]

(ciclopirox) Cream or Lotion

FULL PRESCRIBING INFORMATION

FOR DERMATOLOGIC USE ONLY.
NOT FOR USE IN EYES.

DESCRIPTION

LOPROX (ciclopirox) Cream 0.77% and Lotion 0.77% are for topical use.

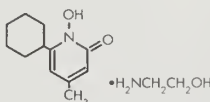
Each gram of LOPROX Cream contains 7.70 mg ciclopirox (as ciclopirox olamine) in a water miscible vanishing cream base consisting of purified water USP, octyldodecanol NF, mineral oil USP, stearyl alcohol NF, cetyl alcohol NF, cocamide DEA, polysorbate 60 NF, myristyl alcohol NF, sorbitan monostearate NF, lactic acid USP, and benzyl alcohol NF (1%) as preservative.

Each gram of LOPROX Lotion contains 7.70 mg ciclopirox (as ciclopirox olamine) in a water miscible lotion base consisting of purified water USP, cocamide DEA, octyldodecanol NF, mineral oil USP, stearyl alcohol NF, cetyl alcohol NF, polysorbate 60 NF, myristyl alcohol NF, sorbitan monostearate NF, lactic acid USP, and benzyl alcohol NF (1%) as preservative.

LOPROX Cream and Lotion contain a synthetic, broad-spectrum, antifungal agent ciclopirox (as ciclopirox olamine). The chemical name is 6-cyclohexyl-1-hydroxy-4-methyl-2(1H)-pyridone, 2-aminoethanol salt.

The CAS Registry Number is 41621-49-2.

The chemical structure is:



LOPROX Cream 1% and Lotion 1% have a pH of 7.

CLINICAL PHARMACOLOGY

Ciclopirox is a broad-spectrum, antifungal agent that inhibits the growth of pathogenic dermatophytes, yeasts, and *Malassezia furfur*. Ciclopirox exhibits fungicidal activity *in vitro* against isolates of *Trichophyton rubrum*, *Trichophyton mentagrophytes*, *Epidermophyton floccosum*, *Microsporum canis*, and *Candida albicans*.

Pharmacokinetic studies in men with tagged ciclopirox solution in polyethylene glycol 400 showed on average of 1.3% absorption of the dose when it was applied topically to 750 cm² on the back followed by occlusion for 6 hours. The biological half-life was 1.7 hours and excretion occurred via the kidney. Two days after application, only 0.01% of the dose applied could be found in the urine. Fecal excretion was negligible.

Penetration studies in human cadaverous skin from the back, with LOPROX (ciclopirox) Cream with tagged ciclopirox showed the presence of 0.8 to 1.6% of the dose in the stratum corneum 1.5 to 6 hours after application. The levels in the dermis were still 10 to 15 times above the minimum inhibitory concentrations.

Autoradiographic studies with human cadaverous skin showed that ciclopirox penetrates into the hair and through the epidermis and hair follicles into the sebaceous glands and dermis, while a portion of the drug remains in the stratum corneum.

Draize Human Sensitization Assay, 21-Day Cumulative Irritancy study, Phototoxicity study, and Photo-Draize study conducted in the total of 142 healthy male subjects showed no contact sensitization of the delayed hypersensitivity type, no irritation, no phototoxicity, and no photo-contact sensitization due to LOPROX Cream.

In vitro penetration studies in frozen or fresh excised human cadaver and pig skin indicated that the penetration of LOPROX (ciclopirox) Lotion is equivalent to that of LOPROX Cream. Therapeutic equivalence of cream and lotion formulations also was indicated by studies of experimentally induced guinea pig and human trichophytosis.

INDICATIONS AND USAGE

LOPROX Cream and Lotion are indicated for the topical treatment of the following dermal infections: tinea pedis, tinea cruris and tinea corporis due to *Trichophyton rubrum*, *Trichophyton mentagrophytes*, *Epidermophyton floccosum*, and *Microsporum canis*; candidiasis (moniliasis) due to *Candida albicans*; and tinea (pityriasis) versicolor due to *Malassezia furfur*.

CONTRAINDICATIONS

LOPROX Cream and Lotion are contraindicated in individuals who have shown hypersensitivity to any of their components.

WARNINGS

General:

LOPROX (ciclopirox) Cream and Lotion are not for ophthalmic use.

PRECAUTIONS

If a reaction suggesting sensitivity or chemical irritation should occur with the use of LOPROX Cream or Lotion, treatment should be discontinued and appropriate therapy instituted.

References: 1) Abrams B., et al. Ciclopirox Olamine: A Hydroxypyridone Antifungal Agent. *Clinics in Dermatology* 1992; 9:471-477. 2) Data in File. 3) Kligman A.M., et al. Evaluation of Ciclopirox Olamine Cream for the Treatment of Tinea Pedis: Multicenter, Double-Blind Comparative Studies. *Clinical Therapeutics* 1985; 7:409-417. 4) Cullen S.I., et al. Treatment of Tinea Versicolor with a New Antifungal Agent, Ciclopirox Olamine Cream 1%. *Clinical Therapeutics* 1985; 7:574-583. 5) Bogaert H., et al. Multicenter Double-Blind Clinical Trials of Ciclopirox Olamine Cream 1% in the Treatment of Tinea Corporis and Tinea Cruris. *J Int Med Res* 1986; 14:210-216. 6) Bogatell F.K., et al. Evaluation of a New Antifungal Cream, Ciclopirox Olamine 1% in the Treatment of Cutaneous Candidiasis. *Clinical Therapeutics* 1985; 8:41-48. 7) Lassus A., et al. Comparison of Ciclopirox Olamine 1% Cream with Ciclopirox 1% + Hydrocortisone Acetate 1% Cream in the Treatment of Inflamed Superficial Mycoses. *Clinical Therapeutics* 1988; 10:594-599.

Information for Patients

The patient should be told to:

1. Use the medication for the full treatment time even though signs/symptoms may have improved and notify the physician if there is no improvement after four weeks.
2. Inform the physician if the area of application shows signs of increased irritation (redness, itching, burning, blistering, swelling, oozing) indicative of possible sensitization.
3. Avoid the use of occlusive wrappings or dressings.

Carcinogenesis, Mutagenesis, Impairment of Fertility

A carcinogenicity study in female mice dosed cutaneously twice per week for 50 weeks followed by a 6-month drug-free observation period prior to necropsy revealed no evidence of tumors at the application site.

The following *in vitro* and *in vivo* genotoxicity tests have been conducted with ciclopirox olamine:

studies to evaluate gene mutation in the Ames *Salmonella*/Mammalian Microsome Assay (negative) and studies to evaluate chromosome aberrations *in vivo* in the Mouse Dominant Lethal Assay and in the Mouse Micronucleus Assay at 500 mg/kg (negative). The following battery of *in vitro* genotoxicity tests were conducted with ciclopirox: a chromosome aberration assay in V79 Chinese Hamster Cells, with and without metabolic activation (positive); a gene mutation assay in the HGPRT- test with V79 Chinese Hamster Cells (negative); and a primary DNA damage assay (i.e., unscheduled DNA Synthesis Assay in A549 Human Cells (negative)). An *in vitro* Cell Transformation Assay in 8ALB/C3T3 Cells was negative for cell transformation. In an *in vivo* Chinese Hamster Bone Marrow Cytogenetic Assay, ciclopirox was negative for chromosome aberrations at 5000 mg/kg.

Pregnancy Category B

Reproduction studies have been performed in the mouse, rat, rabbit, and monkey, (via various routes of administration) at doses 10 times or more the topical human dose and have revealed no significant evidence of impaired fertility or harm to the fetus due to ciclopirox. There are, however, no adequate or well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers

It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when LOPROX (ciclopirox) Cream or Lotion is administered to a nursing woman.

Pediatric Use

Safety and effectiveness in pediatric patients below the age of 10 years have not been established.

ADVERSE REACTIONS

In all controlled clinical studies with 514 patients using LOPROX Cream and in 296 patients using the vehicle cream, the incidence of adverse reactions was low. This included pruritus at the site of application in one patient and worsening of the clinical signs and symptoms in another patient using ciclopirox cream and burning in one patient and worsening of the clinical signs and symptoms in another patient using the vehicle cream.

In the controlled clinical trial with 89 patients using LOPROX Lotion and 89 patients using the vehicle, the incidence of adverse reactions was low. Those considered possibly related to treatment or occurring in more than one patient were pruritus, which occurred in two patients using ciclopirox lotion and one patient using the lotion vehicle, and burning, which occurred in one patient using ciclopirox lotion.

DOSAGE AND ADMINISTRATION

Gently massage LOPROX Cream or Lotion into the affected and surrounding skin areas twice daily, in the morning and evening. Clinical improvement with relief of pruritus and other symptoms usually occurs within the first week of treatment. If a patient shows no clinical improvement after four weeks of treatment with LOPROX Cream or Lotion, the diagnosis should be redetermined. Patients with tinea versicolor usually exhibit clinical and mycological clearing after two weeks of treatment.

HOW SUPPLIED

LOPROX Cream is supplied in 15 gram (NDC 99207-009-15), 30 gram (NDC 99207-009-30), and 90 gram (NDC 99207-009-90) tubes.

Store between 59° and 86° F (15° and 30° C).

LOPROX Lotion is supplied in 30 mL bottles (NDC 99207-008-30) and 60 mL bottles (NDC 99207-008-60).

Bottle space provided to allow for vigorous shaking before each use.

Store between 41° and 77° F (5° and 25° C).

Caution: Federal law prohibits dispensing without prescription.

Manufactured specially for:

MEDICIS, The Dermatology Company[®]
BY: HOECHST MARION ROUSSELL, INC.

The Dermatology Company[®]
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Local and Gay: Addressing the Health Needs of Asian and Pacific Islander American (A/PIA) Lesbians and Gay Men in Hawaii

Valli K. Kanuha PhD

Abstract

Asian and Pacific Islander American lesbians and gay men, who are "local" born and raised in Hawaii face conflicting personal and social expectations due to factors including prejudicial attitudes about homosexuality, A/PIA racial/ethnic traditions, and the unique cultural milieu of Hawaii. Based on anecdotal and research reports of this Hawaii population, health and social needs are discussed with implications for professional health practice.

In December, 1996 Circuit Court Judge Kevin S. C. Chang ruled that the Hawaii statute regarding marriage was unconstitutional and that the state could not deny persons of the same sex the right to obtain marriage licenses solely because of their sex. Judge Chang's ruling opened the way for an amendment to the Hawaii State Constitution defining "marriage as between one man and one woman." The 1998 vote on the same-sex marriage amendment became one of the most heated and controversial local campaigns in recent memory. Lost in the politics, however, was concern with the impact of prejudice and discrimination upon the health and mental health of lesbians and gay men in Hawaii. For whatever we think about homosexuality, gay men, or lesbians, they live and work among us in Ewa, Kohala, and upcountry Maui. They are our cousins, fathers, aunties, and sisters. They teach our children, nurse our *kūpuna*, and work at the local drive-in. Most important, and contrary to how most media accounts depict gay men and lesbians in Hawaii, they are also "local," born and raised in the islands who are part-Hawaiians, Filipinos, Portuguese, Chinese- Japanese and from the many Asian and Pacific Islander American (A/PIA) groups who reside in the state.

This article will describe some of the challenges and conflicts that local gay men and lesbians face in Hawaii. Based on anecdotal reports and studies of "local" lesbians and gay men of Asian American and Pacific Island descent in Hawaii, relevant health and social concerns for medical providers will be discussed.

Overview of Homosexuality

Beginning with Kinsey's linear framework of human sexuality in the 1950s, social scientists have been engaged in analyses to delineate the precise nature and typology of sexual identity development for decades.^{1,2} With regard to homosexuality in particular, the longstanding claim that 10% of the population is gay has often been critiqued due to Kinsey's emphasis on self-reports of sexual behavior without consideration of contextual factors such as psychological commitment or evidence of other practices associated with gay life (such as gay social support, engagement in gay activities, etc.). In addition, most of the study cohorts in this pioneering research were White gay men.^{3,4}

One of the most enduring interests with regard to sexuality, and homosexuality in particular has been the question of its biological versus social origins. While many social constructivists^{3,5} believe that sexuality (sexual orientation, sexual preference) is largely formed by the environment in which people live, in the last decade gay researchers Hamer and LeVay,^{6,7} and Bailey and Paillard in their twin studies⁸ have focused their psycho-biological inquiries on finding a genetic basis to homosexuality. At this point, however, most theorists believe that sexual orientation may be both a fact of one's genetic or biological make-up as well as social influence.^{4,9,10}

In addition, there are methodological conundrums regarding the differences between *sexual behavior*, which focuses on conduct; *sexual orientation*, referring to emotional, sexual, and erotic attraction; and *sexual identity* or self-labeling of all meaningful aspects of conduct, orientation, and lifestyle. That is, should estimates of gay life be based on counts of persons engaged in homosexual behavior? What about persons who self-identify as lesbian but are not engaged in sexual conduct? And how do we account for the many persons who discretely engage in same-sex conduct but are also married with children? Therefore, given the highly stigmatizing nature of homosexuality, it is improbable that we will ever have an accurate estimate of either homosexual behavior or gay/lesbian sexual orientation in the general population.

It was less than 30 years ago that the American Psychiatric Association removed "homosexuality" as a psychopathological disease from the Diagnostic and Statistical Manual of Mental Disorders. Prior to that period, medical and psychiatric professionals as well as society-at-large viewed "homosexuality" not only as deviant but as an illness that could be treated and cured by psychoanalysis, aversion therapies, shock treatment, and as recently as 1951, surgical techniques such as lobotomies.¹¹ While changes in social mores and public policy regarding lesbians and gay men in the United

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Honolulu, HI 96822

States have educated health practitioners to be more responsive to the needs of this population, growing religious and conservative influences in American life have resulted in a resurgence of what is known as “reparation” or “conversion” therapy intended to change the sexual orientation/identity of gay men and lesbians. However, these therapeutic interventions are generally unsuccessful which attests to the highly resistant and perhaps ingrained nature of sexual orientation.^{12, 13}

Sexual Diversity in Asian and Pacific Island American (A/PIA) Populations

Most Asian and Pacific Island cultures have documented the existence of same-sex behavior and relationships for centuries. In the Philippines, *bakla* refers to a man who assumes a female gender role and sometimes same-sex roles and behaviors, similar to the *mahu* in Native Hawaiian or *Kanaka Māoli* (indigenous people of Hawaii) culture.¹⁴⁻¹⁶ During Captain Cook’s early voyages to Hawaii, members of his crew chronicled the importance of *aikāne*, who were male consorts of the male ruling class of *Kanaka Māoli*.¹⁷ There are also accounts of same-sex roles and practices in Samoa with the *fa’afafine*, the Tongan *fakaleti*, and in Korea, Japan, and China.^{14, 18-22}

For Asian and Pacific Island peoples who have either been colonized in their own homelands (such as Hawaii or Samoa) or have emigrated to the United States, some suggest that the influence of Western religiosity, social norms, and acculturation/assimilation patterns have altered once-acceptable variations in values and practices regarding sexuality.²³ In addition, the contemporary portrayal of gay men and lesbians as Caucasian contributes to the perception of many A/PIA populations that homosexuality is a White phenomenon, thereby disavowing the existence of gay men and lesbians in their own A/PIA communities.²⁴⁻²⁶

A/PIA Gay Men and Lesbians in Hawaii

The scarcity of studies about lesbian and gay life among “local” A/PIA communities in Hawaii can be explained by a number of factors. First, many of our “local” cultures value the maintenance of social order and are careful to protect and uphold the collective well-being of the family from anything that will bring public humiliation upon them. As Alexander Nakatani, Maui-born father of two sons who died of AIDS recalls about his upbringing, “I knew how important it was to keep shame from visiting our family...Honor and shame...I think they live in the walls of every Japanese house.”²⁷ While many European American cultures reinforce social norms through guilt, the collective and public nature of shame in Japanese, Chinese, Filipino and other “local” A/PIA cultures is linked to the loss of “face” that results from conducting oneself in a socially unacceptable manner. Having a gay or lesbian family member is considered deviant in most A/PIA populations who reside in Hawaii regardless of the extent of their acculturation to American norms and beliefs.

In addition, traditional A/PIA values about the privacy of intimate matters such as sexuality preclude discussion about such topics among “local” families or in other settings throughout Hawaii including schools, churches, and doctor’s offices. Finally, the relatively insular nature of island life discourages many people from sharing information that is perceived to be discrediting or embarrassing - such as the existence of gay or lesbian family members - for fear

that in the “small town” character of Hawaii it is likely that a co-worker, neighbor, or acquaintance will find out.

For lesbians and gay men in Hawaii who are also “local,” learning to develop and enact their lesbian/gay identities requires a delicate balance of personal needs and social obligations.

Conflicting Loyalties to Family and Self

One study of sexual and racial/ethnic identity among Hawaii-born, “local” lesbians and gay men suggests that the inherent tension of adhering to “local” A/PIA values regarding loyalty to one’s family while simultaneously developing an autonomous sexual identity is a significant stressor.²⁸ As a part-Hawaiian gay man stated, “As long as I don’t talk about ‘it’ my parents and I get along.” In other reports of “local” A/PIA gay and bisexual men in Hawaii, participants reported that while their families of origin (parents, siblings, aunts, uncles, grandparents) were important social supports, the family relationship was also the source of greatest internal conflict.^{16, 28} Many “local” gay men and lesbians state that they are reluctant to either disclose or non-discretely enact their homosexuality for fear of losing the connection to their families. As a “local” Japanese-American lesbian stated:

I thought, I can’t possibly do this [be a lesbian]. My family will hate me...because family and the notion of family was so important in Hawaii.^{29 p. 231}

A common reaction of A/PIA parents when they discover they have a gay son or lesbian daughter is, “What will people in the community think?” Because the concept of “saving face” is an important aspect of many Asian American cultures, one study found that A/PIA gay men and lesbians who choose to remain closeted with their parents also do so in the A/PIA community for fear of being socially stigmatized.³⁰ As argued by Wong, et. al.,¹⁴ “a stronger value (is) placed on loyalty to family roles than on the expression of one’s own sexual desires.”

Social Distancing Linked to Social Stigmatization

In a study of gay and lesbian youth in Hawaii initiated by the 1990 Hawaii State Legislature, many young people and service providers reported acts of harassment and discrimination such as ridicule, taunting, and physical assault from peers and strangers.³¹ More disturbingly, many of these incidents occur in the presence of authorities such as teachers, counselors, or youth workers who either do not intervene or sometimes are responsible for precipitating them. These situations result in many local lesbians and gay males isolating themselves from others, becoming more secretive about their sexual conduct, and engaging in risk behaviors such as unsafe sex, drug use, and running away from home.

In addition, “local” A/PIA gay men and lesbians commonly report that they purposely leave home to attend school or take jobs on the Mainland where they will feel more comfortable “coming out.” A part-Hawaiian lesbian who grew up on Molokai and now resides in California recounts that she originally went to the Mainland to “try to get ahead”:

I came here for an education to work my way home and here I am after twenty something years! My mom said to stay here because the job situation at home wasn’t very good. I think another reason why I stayed here was I wasn’t out. ^{32 p. 88}

In one study, local Japanese, part-Hawaiian, and Hawaiian-Puerto Rican lesbians mention that they were more likely to be public about being gay on the Mainland than at home in Hawaii because as one noted "there was no family and I could start fresh. I could hold hands in public and not have to think about it, and nobody in my family knew."²⁹ p. 230

Finally many "local" A/PIA lesbians and gay men report trying to balance pride and comfort in privately being gay while preserving their familial relationships by publicly not "acting" gay. Wong, et. al.¹⁴ suggest that this private - public tension is not necessarily incongruent as long as one's private behavior does not interfere with one's social behavior. So for example, if a local gay man engages in a same-sex relationship that is discrete and private, while maintaining his social role as a fun-loving (heterosexually-seeming) guy at the baby luau, he may find such an enactment acceptable not only to himself internally but externally to his family. However one significant consequence of this compromise is that many must live what A/PIA lesbian activist Michiyo Cornell³³ calls "the great lie" which dissociates them from parts of themselves, but also from their families and communities.

Health and Mental Health Consequences

Most of the health and mental health effects documented among lesbians and gay men are due almost exclusively to societal denigration known as *homophobia*, which is the fear and hatred of gay men, lesbians, and anyone perceived to be other than heterosexual. Bidwell's study of gay and lesbian youth in Hawaii reported that many young people in this population who choose to be more self-accepting and perhaps public about their gay/lesbian identity risk harassment, rejection, and sometimes peer violence. National studies of gay and lesbian youth document the prevalence of homelessness, truancy and sexual exploitation among this vulnerable population.^{34, 35}

A 1989 study by the U. S. Department of Health and Human Services estimated that gay and lesbian youth are 3-5 times more likely to consider, attempt, and perhaps complete suicide than other adolescents in the U. S.³⁶ Bidwell found repeated accounts of suicidal ideation and attempts in his interviews with Hawaii youth providers, parents, and young people themselves. A worker at the Queen Liliuokalani Children's Center estimated that five gay/lesbian teenagers who received services at the program had attempted suicide during Bidwell's study period.

"Local" gay men and lesbians throughout Hawaii report histories of drug abuse, depression, and anxiety associated with issues including: confusion regarding their sexuality; stress in balancing their gay and family relationships; and lack of peer and social support. In addition, "local" lesbians and gay men may delay or forego health care because of past experiences with homophobic providers, with whom they are ashamed of talking about sex-related problems such as STDs/HIV especially related to same-sex conduct.

However, the most pressing health concern involving this population in Hawaii is the rate of HIV/AIDS among "local," A/PIA gay men. In Hawaii the largest proportion of AIDS cases is among men who have sex with men.³⁷ While Caucasians represent the largest ethnic group in the category of men with AIDS in Hawaii, the number of White men diagnosed with AIDS is generally decreasing

while there is a significant upward trend of HIV infection among the second highest ethnic population in the men who have sex with men category, which are Asian and Pacific Islanders.

Therefore, while the proportion of reported AIDS cases in Hawaii due to men who have sex with men has decreased over time, there has been an increase particularly among Native Hawaiian and Filipino gay and bisexual men who reside in the State. It is argued that the difficulty in reaching "local" gay men with HIV/AIDS prevention messages is that many are ashamed to acknowledge their sexual identity for fear of rejection; the lack of social networks and support that incorporate the cultural needs of non-Caucasian gay men in Hawaii; and, "local" gay men are engaging in HIV risk behavior such as unsafe sex and intravenous drug use in discrete settings where their public identities as gay and "local" will not be exposed.

Implications for Health Care Providers

For Asian and Pacific Islander, "local" gay men and lesbians, the enduring stigmatization associated with homosexuality coupled with "local" values and attitudes about the importance of family and maintaining social relationships has resulted in covert and overt acts of discrimination against them. The particular manner of dealing with this issue is described by one A/PIA researcher as, "don't ask, don't tell, don't know."³⁸

In order to work more effectively with this population there are a number of practice implications for physicians, nurses, allied health providers, mental health clinicians and other health professionals in Hawaii. First and foremost, health professionals have a responsibility to become educated about the unique and challenging issues of being "local" and gay in Hawaii. There is a prevalent misconception that "the gay problem" is a "Haole" matter, and that there are no or few "local" gay men or lesbians. It should be self-evident that homosexuality - as with heterosexuality - is found cross-culturally including throughout all parts of the State of Hawaii. Denying that "local" gay men and lesbians actually live and walk among us in Hawaii is probably the major barrier to health care for this group.

Gynecologists and other women's health providers must not assume that every local Japanese woman who comes in for a PAP smear is having sex with men. Physicians, nurses, and allied health professionals need to sensitize their interactions with clients and patients by attaining knowledge of and skills to address sexuality, homosexuality, and same-sex intimacy in the context of our "local" Hawaii and traditional A/PIA cultures, and to do so in a non-judgmental manner.

Due to the "small town" nature of life in Hawaii, many gay men and lesbians need to be reassured about the importance of confidentiality in the provider-patient relationship. The fact that local gay men from the Neighbor Islands will sometimes fly to Oahu for HIV testing or other health care is evidence of the effects of social stigma that many are trying to avoid.

Finally, individual health providers and health professional associations must advocate for increased training and continuing education for medical and health practitioners on sexuality, gay and lesbian health issues, and the unique needs of "local" sexual minorities in Hawaii.

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YOU WOULDN'T LEAVE SOMETHING THIS DANGEROUS ON YOUR BODY. OR WOULD YOU?

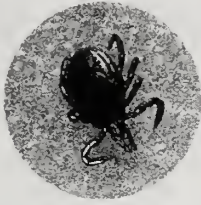


Fig. 1: Deer Tick

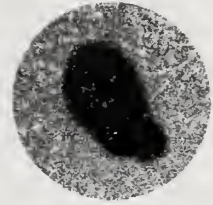
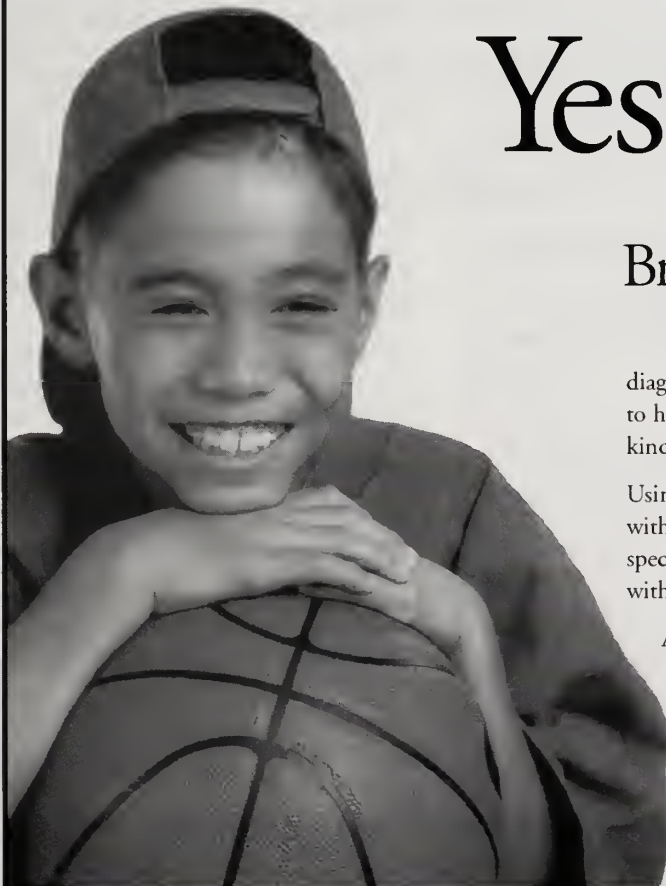


Fig. 2: Melanoma

Melanoma is the deadliest form of skin cancer. In fact, one person an hour in the U.S. dies from the disease. Fortunately melanoma can be completely cured if it's caught early enough. So examine your skin regularly. If you find a blemish larger than a pencil eraser, multi-colored, asymmetrical or irregular at the edges, you may have melanoma and should see your dermatologist. For more information on melanoma, call 1-888-462-DERM, or visit www.aad.org.



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W. Mitchell Sams, Jr.'s Open Letter to His Son:

Dear Hunter: Now that you have completed the first three years of medical school and are increasingly excited about patient contacts and your future role as a physician, I'd like to take this opportunity to pass on to you some thoughts that I have developed over many years of practice and that, if followed, are certain to make your own professional life more rewarding and your patients more satisfied.

* Don't forget to smile as you enter the patient's room. Such a simple gesture is terribly important and puts the patient immediately at ease.

* Remember that a patient often is frightened and lonely. Take the time and expend the effort to sit down with that patient, relax and just talk and listen, rather than standing as though you are in a hurry to leave the room.

* Write your notes about the patient and your prescription in the patient's room. It is much more meaningful to them and permits you to spend more time with the patient. They may think of other questions important to them when you are relaxed.

* Touch the patient, even if just lightly on the arm. This shows you are not afraid of catching whatever they have (whether skin diseases or not), but also conveys concern and understanding. It can be a magnificently important gesture.

* Learn some "nonessential" information about the patient, such as hobbies, recent trips, children's achievements and ambitions. Then make a note of this in the chart and bring up the subject again on the next visit. You will be amazed at how impressed the patient is with your "memory" for these events.

* It is o.k. to express confidence in helping the patient that may not be totally justified by the options. The patient's confidence in you and in the real possibility of improving his or her condition can enhance the healing process.

* At the same time, tell the truth. If the disease is not curable (such as psoriasis or atopic dermatitis), say so, but quickly add that it can be controlled with appropriate therapy. I liken psoriasis to arthritis or diabetes, neither are curable but both are usually controllable. Patients seem to understand and accept that better.

* If you are running behind schedule, apologize to the patient as you enter the room. It puts them off guard if they were planning to complain and lets them know you are aware that their time is also important.

* Express your appreciation often and sincerely to the people who help you be what you are — your colleagues, your nurses, your residents, your receptionists. You will not be a success without them. Be sure you let them know that.

(W. Mitchell Sams, Jr was president of the American Academy of Dermatology when he wrote the above letter which appeared in the *Dermatology World* Vol #10 October 1996. Ed. We keep a copy of the letter on our desk as a constant reminder.)

MISCELLANY

There is the story of the computer that was ordered to translate a common English phrase into Russian and then translate the Russian back to English...What went in was "Out of Sight, Out of Mind." What came out was "Invisible Insanity."

POTPOURRI

A BIG HELP....

One day a patient came in and breathlessly described what sounded like a truly ghastly car accident that she'd witnessed at her corner.

"There was blood everywhere," she panted, "and cries and groans for help."

"I was very proud of myself, Doctor. I remembered all my first aid course work — I took a deep breath, put my head between my knees and didn't faint!"

*Dr. Marion Rogers, Vancouver
Stitches, Aug 99*

JUST PERFECT...

A friend was applying for immigration into Canada and submitted himself for the required physical exam. The examining physician was young and obviously a recent medical graduate. As he finished, he explained, with an apology, that he was required to perform a rectal exam. He was as embarrassed at having to do this as my friend was at having to submit to it.

After the examination, the physician said, "I am sorry I had to do that, but you know, only perfect assholes are allowed into Canada!"

*Dr. Michael Golbey, Kelowna, B.C.
Also
from Stitches...*

CONFERENCE NOTES..."Angina and Silent Ischemia"

**VP William Parmley,
Prof of Medicine, UCSF...
7-15 Fri Am Conference, Kam Aud,
QMC**

Discussion:

Silent Myocardial Ischemia (SMI): Incidence: 4% of population...Angina and SMI: 3/4 of episodes are silent...SMI is not benign...

Prognostic implication of SMI with stable angina: Risk of death or adverse outcome...

SMI with Unstable Angina: Increased risk 3-4 times of adverse outcome...SMI plus risk factors increases potential of death...

SMI is marker of more severe disease.

Post MI: Increased risk with SMI.

* SMI diagnosis c Treadmill...

CAST Study:

CABG vs Medical therapy: Neg treadmill = better prognosis than positive treadmill. Adverse prognostic sign when ischemia occurs without pt perception viz SMI... (Smoking: acute risk factor which is reversible)

Framingham Follow Up:

% of silent MI's: men = 28%; women = 35%; elderly women even higher

Summary:

MI = Imbalance of oxygen supply & demand:

- HR + BP = Rate/Pressure gradient
- Reduced demand \bar{c} BB (Beta Blockers)
- Reduced supply 2° to: \pm vasoconstriction + stenosis + blood flow; a little constriction \rightarrow MI.

Rx Demand (HR & BP) vs Supply (vasoconstriction)

Rx: a) \downarrow demand + b) \downarrow vasoconstriction

re Demand: a. Circadian rhythm...MI's occur Monday mornings (getting up to go to work)
Re Sudden Cardiac Death: Less MI's \bar{c} ASA qd (Physician MI Study) viz \uparrow platelet aggregation factor

Why AM? Surge in BP, HR, catecholamine \rightarrow plaque rupture; stickier platelets..

Therapy: Ischemic Heart Disease....

- Variant Angina: a. Ca CB (eg amlodipine...every CaCB works) + b. Nitrates
- Stable Angina: a. Beta blockers: Rx of choice; Betablockers > nitrates
- Vasoconstriction: a. CaCB + nitrates ie combination Rx

re Beta Blockers (BB): effective in post MI; \downarrow HR = most important; \downarrow mortality

BB ROLE IN CIRCADIAN RHYTHM:

- Reduces AM surge (eg c atenolol)
- BB works best in AM hours...

CaCB Role: Nifedipine GITS (Procardia XL) (long acting CaCB) Uniform 24° level. But with Nifedipine GITS: no difference in ischemic events; whereas BB reduces AM ischemic events...

**SMI Therapy (may be worthwhile...Should we pursue RX?)

In Stable Angina: Revascularization group has best results. If SMI shows *High Risk Ischemia by quantification \bar{c} : ETT; ECHO MUGA; Perfusion; AEM etc and if all these tests are positive, revascularization is indicated in SMI...

re Vasoconstriction: a/c endothelial cells (viz abnormal endothelial cells cause vasoconstriction)...All the cardiac risk factors cause vasoconstriction... Improve the endothelial cells so they would vasodilate rather than vasoconstrict...Healthy E.C's release NO (nitrous oxide) which cause vasodilation...

re Angina Post-prandial: High fat meal causes vasoconstriction; adding vitamin E prevents vasoconstriction...

*Lowering cholesterol improves endothelial cell function...Therefore Statin role in improving endothelial cell function...

***ACE's, ARB's, Statins: All improve endothelial Cell function...

Adverse Endothelial Cell function a/c the following:

- Hypertension
- Hyperlipidemia
- Angina
- Diabetes
- Hyperglycemia etc.

Therefore E.C. Function improves with:

- Anticholesterol agents (Statins and Resins)
- ACE's & ARB's
- Antioxidants
- Fish oil
- L-Arginine
- N-Acetylcholine
- Exogenous nitrates

POTPOURRI I

John and Julie shared an apartment...John's mother was over for dinner and became suspicious of a relationship between the two — though John volunteered that Julie and he were just room mates...

A week later, Julie told John that the beautiful silver gravy ladle had been missing since his mother's visit...He felt foolish, but he wrote:

"Dear Mom: I'm not saying you "did" take a gravy ladle and I'm not saying you "did not" take a gravy ladle, but the fact remains that we are missing one since you were here for dinner."

Several days later, John received this letter.

"Dear Son: I'm not saying you "do" sleep with Julie, and I'm not saying you "do not" but the fact remains that if she were sleeping in her own bed, she would have found the gravy ladle by now." Love Mom...

From J. Campbell's desk...

CONFERENCE NOTES..."Angina: Emphasis on Hypertension and Hypercholesterolemia Control"
VP Shahbudin Rahimtoola, MD. Prof of Medicine USC. 7/23/99 Kam Aud QMC

Management of CAD Pts...

- Educate patient and family
- Treat complications of CAD; ie ischemia, MI, CHF, arrhythmia, mechanical complaints..
- Treat coronary atherosclerosis: Smoking cessation; hyperlipidemia; systemic HTN; control diabetes.... d. Others: ASA, control obesity; exercise, alcohol

Cigarette Smoking and Atherosclerosis: Fatty streaks and fibrous plaques found in teen agers and young adults who smoke...

"If you change a man, that's only one man...If you change a woman, you change the whole family."

Prof Wu Qing...

Exposure to passive smoke: Second hand smoke raises mortality by 30%...

Hypertension & CAD: 43 million cases of HTN in US...

a. NHANES III: Systolic hypertension common in Age 60 plus...31% of hypertensives don't know...Only 1/2 of hypertensives are controlled...

b. VA Cooperative Study (1962-1970): Reduced death and cardiovascular events with HTN control...Even mild HTN treated aggressively reduces events...HTN treated even in 80 yr olds reduces events and CHF...(50% reduction in CHF c HTN therapy...) 11% reduction in events by treating moderate HTN...

•Physician Health Study: 40% of MD's did not know they had HTN... 22% mortality with untreated Systolic HTN...

re Pharmacological Therapy:

a. Beta blockers: As good as placebo...Not the way to go...Diuretics are better than BB...In older pts, be careful c BB...Beta blockers cause fatigue, sexual dysfunction...

re E.D. (erectile dysfunction) Ask questions with partner present...Men have difficulty admitting E.D.

"The worst thing in HTN is not to control BP properly"

HOT Trial (19,000 pts in 3 groups): Ideal diastolic pressure: 80 and systolic pressure: 130- 135...

SYS- EUR Trial: Av diastolic pressure 80: Fatal and non fatal MI reduced but not as much as CVA...

How Many Drugs? (HOT Trial)

<u>Diastole 80</u>	
Felodipine	79
ACE	45
Beta Blocker	32
Diuretic	24

Should we use multiple drugs in older patients?

General principle: Try treating once a day with a single drug...Better control with one pill...

PRAISE-1: Amlodipine improved survival in patients with HTN, Angina and LV systolic dysfunction...

Older patients c HTN and Diabetes: CaCB reduces mortality

SYS-EUR Trial: CaCB more effective than diuretics in older patients with HTN and Diabetes...

Choice of Drugs:

1. Systolic HTN in Older Patients:

- CaCB
- Diuretic
- ACE

2. HTN & Angina:

- CaCB
- Beta blockers

3. HTN & Diabetes:

- CaCB
- Diuretic
- ACE

4. HTN & ANGINA & LV Systolic Dysfunction:

- Amlodipine
- ACE
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POTPOURRI II

A senior citizen was driving down the freeway when his car phone rang. His wife was on the line. "Herman," she said, "I just heard on the news that there's a car going the wrong way on 280. Please be careful!" "Hell!" Herman replied, "It's not just one car. There are hundreds of them!"

"I woke up this morning feeling so bad," one fellow told another, "that I tried to kill myself by taking a thousand aspirins."

"Oh really? What happened?"

"After the first two," he said, "I feel better."

Years after giving up on the idea of motherhood, a 65 year old woman had a baby with the help of a fertility specialist. All her relatives came to visit. When they asked to see the baby, the mother held them off with "Please, not yet." A little later, they asked again and they were again put off with "Not yet!"

An hour passed and they became impatient. "When can we see the baby?"

"When the baby cries," she said.

"Why do we have to wait till she cries?"

"Because," the mother explained, "I forgot where I put her."



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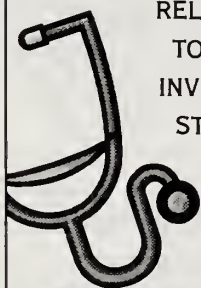
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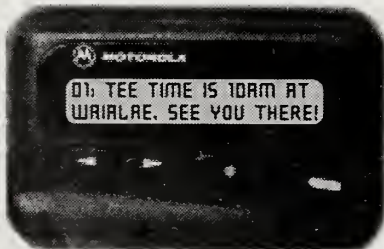
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MEDICAL TIDBITS...

The carpal-tunnel syndrome occurs in as many as 1 in 5 people complaining of tingling in their fingers...

Babies of HIV positive mothers have a 30% chance of contracting the virus during delivery. The inexpensive commonly used anti-viral drug NEVIRAPINE reduces the incidence to 13%. One pill for the mother during labor and a few drops for the baby within 3 days of birth.

Italian researchers have found that 1/3 of hepatitis C patients also harbored hepatitis B virus though it didn't show up on a standard blood test.
TIME Jul 26 '99

Two studies in the NEJM reported that mitral valve prolapse (MVP) may not be as prevalent or dangerous as believed (however the more severe forms can still be life threatening)

Lisa Freed and her colleagues examining a broad cross section of adults in the Framingham Heart Study found only 2.4% with mitral valve prolapse and that half were less harmful variations of normal cardiac design.

Robert Levine, cardiologist at Massachusetts General Hospital, co author of the NEJM articles discovered 10 years ago that in ultra sound scans, the front-back view was more valuable than the side to side view in determining the actual presence of prolapse.

MEDICAL TIDBITS...

Safer Sizzling: Barbecuing produces carcinogens, but researchers report that marinating beef with Hawaiian teriyaki and Indian marinades can reduce carcinogens by 65%.

Are Cigars Safe? The NEJM in June reported that cigar smoking boosts the risk of heart disease 56%...Smoking cigars regularly increases your risk of emphysema and cancers of the lip, lung, throat and esophagus...Kaiser Permanente researchers funded by the National Cancer Institute combed their computerized medical records for Northern California and found 16,228 men who never smoked cigarettes or cigars and another 1,546 who smoked only cigars (1971-1995)...Results of the study:

- a) Less than 5 cigars/d had a 34% greater risk for throat and oral cancer and a 57% greater risk of lung cancer.
- b) Men who smoked 5 or more cigars/d: 620% greater risk of oral and throat cancer; 220% greater risk of lung cancer...

POTPOURRI III

A young couple on the brink of divorce visited a marriage counselor. The counselor asked the wife about the problem.

"My husband suffers from premature ejaculation," she said.

"Is that true?" the counselor asked, turning to the husband.

"Well, not exactly," he replied. "She's the one who suffers, not me."

What do the Dirt Devil and Viagra have in

common? They both put the power of upright in the palm of your hand.

A store manager, in an effort to inspire efficiency, placed a sign directly above the men's room sink: "THINK!"

The next day someone had carefully lettered another sign just above the soap dispenser: "THOAP!"

(From Playboy Party Jokes)

Anti-Aging Therapies— (Cleaned from the May '99 issue of Mayo Clinic Health Letter)

The search for the fountain of youth: an update...Researchers have found that aging is an intricate and complex process...Its unlikely that a single pill or potion can be a cure all...Researchers have found certain strategies that do work:

- a) Exercise with a healthful diet, and regular mental activity...
- b) Women: ERT keeps bones strong, reduces cardiovascular disease, restores vaginal lubrication, improves skin elasticity and maintains mental function.

Re Anti-oxidants:

- a) Vit E (400 I.U.): most promising of all the antioxidants...protects against cardiovascular disease, Alzheimer's and Parkinson's.
- b) Vit A and Betacarotene: Betacarotene (which is converted to Vit A) offers no protection against heart disease. Also two studies have shown that smokers taking Betacarotene have more lung cancer.
- c) Vit C: Diets high in Vit C prevent cancer and heart disease (but no proof that Vit C pills do the same)
- d) Selenium: Antioxidant mineral (esp in sea food and liver) may prevent cancer. Excessive amounts cause hair and nail loss.
- e) Coenzyme Q10: Unproven that it slows aging and stops cancer spread. Has promise in treatment of CHF.

Re Hormones:

- a) DHEA (Dihydroepiandrosterone): DHEA converts to estrogen and testosterone (Banned in 1985 by FDA)...

Proponents feel DHEA slows aging, increases muscle and bone strength, burns fat, improves cognition, bolsters immunity, and protects against chronic diseases (As yet, no proof) Side effects: cause liver damage, certain cancers and heart disease.

- b) Testosterone: Low testosterone levels lead to loss of sex drive and energy...High testosterone levels: improve energy levels and sex drive...(but cause prostate problems, elevated cholesterol levels and infertility)

- c) Melatonin: Hormone produced by the brain...Regulates sleep; may slow aging, prevent aging and increase sex drive.

- d) hGH (Human growth hormone): Promotes growth spurt in children...Proponents: burns fat, builds muscle and renews energy; some studies suggest benefits; side effects: fluid retention, joint pain, diabetes and hypertension.

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Announcement

AESTHETICA Plastic and Laser Surgery Center is pleased to announce that it has successfully completed accreditation of its office and outpatient surgical facility by the American Medical Association Accreditation Program. Dr. Caputy wishes to thank and congratulate Dr. Joy Bliss and the rest of his staff for their tremendous effort and success in this arduous process. The 97% rating achieved by the evaluation committee attests to the quality of patient care afforded by the AESTHETICA team.

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A HERO IS A MAN WHO FOUGHT VALIANTLY FOR OUR CAUSE.

Our lives and our medical ranks are diminished by the sudden death of John Zelko, M.D. of Hilo. John served long and honestly in the field of eye surgery, bridging the generation of pre-microscopic ocular surgery long before the lens implant, on through the advent of laser refractive surgery. Always kind, ever careful and with a puckish and wry wit, John was a delight to be around and to work with. In 1995, Dr. Zelko was attacked by the drug enforcement agency for writing a simple prescription for an appetite suppressant for a friend. It was a cruel and seemingly malicious attack that was never adequately explained, and it threatened every physician who would prescribe a drug outside of his immediate area of practice. Of course, he had done nothing wrong, and was supported by virtually the entire medical community. His sterling reputation was maintained despite the adverse media attention generated by the DEA. Ultimately, the complaint was dropped with a paltry penalty. He deserved an apology. John Zelko, M.D. was truly one of a kind, a kind that will be sorely missed and long remembered.

NO GOOD DEED SHOULD GO UNPUNISHED.

Since 1985 the American Academy of Ophthalmology promoted the National Eye Care Project (NECP) to provide eye examinations without charge for eligible people over age 65. 7,000 participating AAO fellows and members cared for the patients and waived the co-payment and deductibles. This highly successful program has been acclaimed by many including the American Medical Association, as a demonstrable effort to provide care for needy elderly patients. However, when Congress passed the Health Insurance Portability and Accountability Act the NECP was essentially destroyed. The fraud and abuse provisions of the act require the NECP to perform a financial need analysis before patients can be referred! Thomas Hutchinson, M.D. NECP chairman is working with the Health and Human Services in an attempt to circumvent the restrictive provisions. Bureaucracy strikes again.

THE AMERICAN MEDICAL ASSOCIATION JOINS THE TEAMSTERS — NOT!

The media has made a major news story out of the AMA House of Delegates action to assist employed physicians and some residents to form an affiliated labor organization to deal with HMOs in regard to matters of patient care. Big Deal! None of the hoopla represents any change in the basic fact that independent physicians are not allowed to organize to negotiate with third parties in regard to insurance abuses, arbitrary changes in reimbursement, contracting, or medical definitions. The National Labor Relations Board has ruled that doctors who are employees can act in concert, but the great rank and file of partnerships, associated groups and independents remain locked out of collective bargaining. Moreover, as long as the Republicans continue to answer to the insurance money, the current Senate bill to loosen the NLRB rule has little chance.

REALLY IMPORTANT PEOPLE WHO DON'T KNOW WHAT THEY ARE DOING!

A more vital item of AMA business was a report by the Council on Ethical and Judicial Affairs which would require physicians to be responsible for reporting impaired patients to their state department of motor vehicles. The House of Delegates initially approved the report, but the ophthalmology team succeeded in winning reconsideration; a truly rare parliamentary event. On second discussion, the House recognized the breach of patient confidentiality and the liability risk for physicians, and voted the report down. Congratulations to team leader Ruth Williams, M.D. and the eye surgeons in the House.

THE AIR BAG - ANOTHER NADER MAKE-WORK PROJECT FOR TRIAL ATTORNEYS.

The driver of the new pick-up truck ran a red light with his two-year-old child in a rear facing child-carrier belted in the passenger seat. A crash occurred, and the air bags deployed which killed the baby. This tragic event was compounded when a judge found the driver guilty of vehicular homicide because he had not used the air bag cutoff switch! Now 3.2 million such vehicles are equipped with a switch which will deactivate the air bags. The judge sentenced the father to two days in jail; one to be served on his dead son's birthday and the other on the anniversary of the fatal accident. Also, he ordered that the driver make public-service announcements regarding air bag safety. What a compassionate fellow that judge! The National Highway Traffic Safety Administration (NHTSA) had conducted their original research using 170 lb. unbelted dummies, and claimed that 31% of lives would be saved by air bags in head-on crashes. However, it was soon learned that the exploding bag at 200 mph can be lethal for short people and small children, not to mention the 300,000 "minor injuries" that ranged from broken bones to shattered eardrums. Never admitting that air bags might be a bad idea, of course, the NHTSA has come out with a set of guidelines that read like gun safety; (1) seatbelts must be fastened, (2) do not sit close to the dash board, (3) little people and children under 12 should not sit up front, (4) don't reach for something in the glove box when leaving a parking spot (broken neck), (5) do not drive with your hands in the classic ten-to-two position (broken arms), (6) point the tilting steering wheel toward the chest not the face. Why cannot NHTSA merely do the logical thing and admit that seat belts save lives, but air bags do not.

THE TRUTH IS THE DOG TRAINED PAVLOV TO RING THE BELL WHEN IT WAS HUNGRY

You have to admire those creative busybodies on the American Board of Medical Specialties. The board re-certification revision has hardly had time to become active, yet now the ABMS hopes to scrutinize diplomates and assess their actual performance rather than merely test cognitive skills. ABMS Executive Vice President Stephen H. Miller, M.D. states that "maintenance of certification" would include evaluating patient outcomes, quality improvement initiatives, and lifelong education in the certification process. What a quagmire of data that would produce! At the present time, the American Medical Association Accreditation Program provides an ongoing quality evaluation, and the ABMS action is seen as a competitive attempt to capture exclusive purview over specialists. Is this trip really necessary?

ADDENDA —

❖ In Holland, the government will not attempt to prosecute euthanasia cases since the law is now too vague. Anyone for a slippery slope?

❖ Metallic body parts - heart of gold, nerves of steel, will of iron, balls of brass.

Aloha and keep the faith —rts■



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Hale Kilolani

Hale Kilolani means, "Observatory" in Hawaiian. Hawaii's high mountains provide an ideal setting for such scientific observations.



Editorial

Norman Goldstein MD
Editor, Hawaii Medical Journal

Special Issue on Healthcare Legislation

This is a very special issue. It is not the Hawaii Law Journal, but our legal and legislative associates have been major contributors to these two laws - with the help of HMA's new President-Elect, Phil Hellreich, our legislative committees, Heidi Y. Singh, HMA Director of Legislative and Government Affairs who summarized and extracted the laws, Becky Kendro, Drake Chinen and our HMA staff.

These laws, the Uniform Healthcare Decisions Act, and the Patient Bill of Rights and Responsibilities Act, may well impact on every physician and every patient. As President-Elect Phil suggests, "Keep this edition of the Journal as a reference for future use."

A special "Thank You" to Jim Pietsch, J.D., for his "FAQ" (for those of you not on the Web, That's Frequently Asked Questions) about these important laws. Jim and I spent two years on the Governor's Blue Ribbon Panel on Living and Dying with Dignity, and he's the author of the Elder Law Handbook published by the University of Hawaii Press.

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Guest Editor

Philip Hellreich MD

Every legislative session bills that directly impact the way you practice medicine are debated at the Capitol. HMA devotes considerable time to drafting or amending bills that affect the way we care for patients and run our practices. Passage of the prompt payment bill is direct evidence of the importance of legislative advocacy. We also expend a lot of effort to defeat legislation that is harmful to patient care (e.g.: prescriptive authority for mid-level practitioners). Throughout the legislative session we try to keep you updated on what is occurring at the Capitol through "blast fax" weekly legislative updates, the newsletter and the comprehensive summary of bills sent to members at the end of the session. However, there are certain laws which have a greater impact on our profession and therefore require a more in-depth analysis for your reference. Two such laws are the Uniform Health Care Decisions Act, (signed into law on July 1, 1999), and the Patient Bill of Rights and Responsibilities Act (the original was signed into law in 1998 and a second bill was signed into law on June 25, 1999). This edition of the journal contains detailed summaries of these laws.

The Uniform Health Care Decisions Act repeals current law on Medical Treatment Decisions ("Living Will") and Power of Attorney for Health Care Decisions and combines them into one statute. It also creates a sample, optional advance directive/living will form for individuals to use or modify to their needs. This sample is provided for you to share with your patients.

The two Patient Bill of Rights and Responsibilities laws provide for significant protections for patients enrolled in all health plans. In particular, all health plans in the state must be accredited by a nationally recognized accrediting body. Plans must demonstrate to the insurance commissioner, upon request, that they make benefits available and accessible to each enrollee, provide access to sufficient numbers and types of providers and provide emergency health care services 24 hours a day and 7 days a week. The law also calls for the federal "prudent layperson" standard for emergency services and prohibits gag clauses or practices from being imposed upon physicians for discussing treatment options or services not covered by the plan. Moreover, plans must establish and maintain an internal complaint and appeal procedure. Upon exhausting a plan's internal appeals structure, a patient, or the patient's physician or designee, is allowed to appeal to an external review body set up by the insurance commissioner.

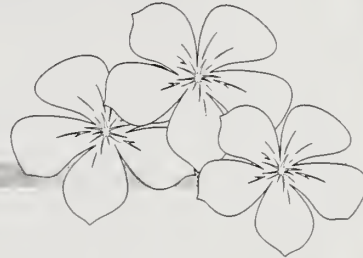
I hope you will take the time to review these laws and to keep this edition of the journal as a reference for future use. It is important that as patient advocates we be knowledgeable about living wills and protections for patients under managed care.

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Medical School Hotline

Public Health In Medical Education

Seiji Yamada MD, MPH and Neal Palafox MD, MPH

A woman at a riverbank sees somebody caught in the current. She jumps into the water, rescues the nearly drowned victim, and brings her to safety. As soon as she is back at the riverbank, she sees somebody else in the water. She rescues that person, too. Again, as soon as she is back, she sees another person drowning—then yet another. Finally, she decides that it is a better use of her time to go upstream to figure out who is pushing these people into the water.¹ This classic parable illustrates the relationship between medicine and public health. While clinical medicine can be of benefit in relieving suffering, without an understanding of what is at the root of suffering, we cannot make any headway into preventing it, and we will always be faced with drowning victims. With this viewpoint in mind, we examine the role of public health in medical education.

Recent changes in medicine itself encourage a more populational approach to medicine for all practitioners. Evidence-based medicine is a means for applying the results of data collected on populations of patients to the clinical setting of the individual patient. Managed care applies populational data to rationalize medical care, contain costs, and increase profits. Given, however, that the goal of proprietary organizations is to externalize costs, they cannot fulfill the role of meeting the needs of society as a whole, particularly the needs of the most disadvantaged. Thus, despite the growth of managed care, the public sector will be the ultimate insurer of the public's health. The need for physicians to be able to practice effectively in the present and future health care environment has prompted the American Association of Medical Colleges to call for enhancement in the teaching of populational issues in U.S. medical education.²

The four perspectives that comprise the foundations of the curriculum at the University of Hawai'i John A. Burns School of Medicine (JABSOM) are (1) population, (2) behavioral, (3) biological, and (4) clinical.³ Among JABSOM faculty, there is agreement that the populational and behavioral perspectives are insufficiently emphasized and integrated into the curriculum. Thus this past academic year, some public health issues have been introduced into the first-year health care problems that students encounter as part of their Problem-Based Learning (PBL) curriculum. For example, the diarrhea case was rewritten so that it is now that of an infant from the Marshall Islands, so that students examine public health aspects of diarrheal disease in developing countries, the number one cause of childhood mortality worldwide. During the mid-trimester evaluation and feedback session, a student asked whether such public health concepts would be covered on the final examination. In this question there was a plea. Students were saying, we are already laboring under the weight of basic science and clinical information overload. We cannot learn public health in addition to medicine. During the feedback session, the faculty replied that, as they were in medical school, that the focus of the exam would be medical. Indeed, the examination largely tested biological and clinical concepts. Perhaps, however, an appropriate response to the student query would have been the parable above.

Indeed, it's unrealistic to expect that medical students will learn the material that students of public health must master. In some ways, the situation is analogous to that of our medical school colleagues in the basic sciences. They cannot expect medical students to learn the material that they expect their graduate students to master. The difficulty is deciding to what depth medical students need to know the material and presenting the material in such a way that makes it relevant and useful to the work of medical practitioners. The key is to keep in mind the principles of PBL: keep the material relevant to the case, i.e., integrate the material into the health care problems.

How, then, can the teaching of public health concepts at the medical school be improved? Firstly, the PBL curriculum needs to be re-examined to see if the cases cover the diseases that cause the greatest morbidity and mortality. The health care problems, initially adapted from the curriculum of McMaster University in Ontario, Canada, follows an organ-based se-

quence in Units 2 through 4. (Unit 1: health and illness. Unit 2: cardiovascular, respiratory, and renal. Unit 3: gastrointestinal, endocrine, and hematology. Unit 4: neurologic, locomotor, brain, and behavior. Unit 5: the life cycle, covers reproductive, child, and geriatric health.) Some subjects that do not fit into the sequence are not given adequate attention. Recent graduates have identified nutrition and infectious disease as two such areas. (Note that they did not identify oncology as a deficiency despite the lack of a subunit on oncology. There are sufficient numbers of problems of patients with cancer interspersed through Units 1 through 5.)

Certain relatively rarely encountered clinical problems introduce relevant biologic subjects. Thus, in the past, the gastrointestinal subunit of Unit 3 included cases of Zollinger-Ellison syndrome, which introduces the endocrine control of digestion, and celiac sprue, which introduces intestinal absorption. While coverage of such basic science issues is important, a populational perspective on curriculum design would demand more attention to common diagnoses. From a clinical standpoint, while it is important that clinicians recognize rare diseases, it is imperative that primary care practitioners know common diseases thoroughly. The peptic ulcer problem now concentrates on *Helicobacter*. Further, might the gastrointestinal/endocrine/metabolism sequence be an appropriate place to cover nutrition? Overnutrition is now covered in a health care problem on obesity. Subjects such as infectious disease and nutrition do not need their own subunits. Rather, they can be addressed in the curriculum as they arise within the health care problems. Such a strategy would be consistent with the PBL philosophy.

The choice of diseases to be included in the curriculum should take into account the global epidemiology of disease,⁴ the epidemiology of the U.S.,⁵ the epidemiology of Hawaii,⁶ and the epidemiology of the Pacific Islands. Kept in mind is the mission of JABSOM, which includes improving the health of the Pacific Islands. The epidemiology of Hawaii and the Pacific are specific to those area of the world and is different from that of the U.S. as a whole. While such data should help in curriculum development, they should also be made explicit to students so that the desire to maximize their potential to improve the lot of the most people will motivate medical students to learn about the most prevalent diseases.

As students formulate their learning agenda from their health care problems, learning issues with populational content are selected. Typically, the literature is searched for geographic, ethnic, gender, and socioeconomic risk factors; incidence, prevalence, and mortality rates for the medical problems under study. As students wrestle with the utility of diagnostic tests, epidemiologic concepts such as predictive value are introduced. Students are encouraged to familiarize themselves with the scientific evidence for the efficacy of therapeutic regimens. Indeed, the concepts of evidence-based medicine are populational, epidemiologic and biostatistical concepts applied to daily patient care.⁷

The practice of clinical medicine is like the task of the rescuer downstream—to save people from drowning in the river. At its root it is a moral endeavor, the reason why we entered medicine. Yet, it seems an abdication of responsibility for physicians to exclude from their purview what is happening upstream. Those who witness suffering have a special responsibility to pay heed to what causes that suffering. The task of keeping people from being pushed into the river in the first place involves effecting more fundamental changes. The rewards may not be immediate, but they may be more profound. It is evident that public health, too, is a moral endeavor. After all, the Greek god of medicine, Asclepius, had two daughters, Panacea and Hygieia, the goddesses of healing and of health. As the two fields are sister disciplines, medical practitioners should also learn the fundamentals of public health. For those who teach medicine, we are charged with inspiring our students to look upstream.

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5. National Center for Health Statistics. <http://www.cdc.gov/nchswww/>

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7. Kasuya, RT, Sakai, DH. An evidence-based medicine seminar series. Acad Med 1996 71(5):548



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*The Physician Leadership Program, sponsored by the Health Care Leadership Institute, is an intensive 3-day seminar designed to assess and refine physicians' leadership skills. For information, contact Laura Johnson Morasch at (415) 394-9121.

Legislative Briefing: Patient Rights and Responsibilities Laws

Background

In 1998, the Governor signed into law ACT 178 which establishes the Hawaii Patient Bill of Rights and Responsibilities Act. This law is the first step toward insuring that patients are afforded rights and protections in the evolving health care industry. ACT 178 created a task force chaired by the Insurance Commissioner to monitor implementation of the law and to draft additional legislation to strengthen the original bill. HMA is a member of the task force along with individuals representing consumers, hospitals, health plans, and government. This past legislative session, a second bill was drafted by the task force to build upon the original Patient Bill of Rights and Responsibilities Act. The bill passed and was signed into law (ACT 137) on June 25, 1999.

The purpose of this document is to provide you with a summary of the provisions of the two patients' rights and responsibilities laws. *This document is intended as an informational guide only and not as legal advice.* For a complete copy of the law or for additional information, please contact Heidi Singh, Director of Legislative/Gov't Affairs, at 536-7702, ext. 2241 or hysingh@juno.com.

[NOTE: The definition of managed care plan in the laws is drafted to apply to all health plans. The term "commissioner" refers to the insurance commissioner]

Access to services

A managed care plan shall demonstrate to the commissioner upon request that its plan:

- 1) Makes benefits available and accessible to each enrollee electing the managed care plan in the defined service area with reasonable promptness and in a manner which promotes continuity in the provision of health care services;
- 2) Provides access to sufficient numbers and types of providers to ensure that all covered services will be accessible without reasonable delay;
- 3) When medically necessary, provides health care services 24-hours a day/7-days a week; (NOTE: The task force has recently been directed by the Legislature to develop a definition of "medically necessary")
- 4) Provides a reasonable choice of qualified providers of women's health services such as gynecologists, obstetricians, certified nurse-midwives, and advanced practice nurses to provide preventive and routine women's health care services;

5) Provides payment or reimbursement for adequately documented emergency services

6) Allows standing referrals to specialists capable of providing and coordinating primary and specialty care for an enrollee's life-threatening, chronic, degenerative, or disabling disease or condition.

Emergency care

A health plan shall reimburse an emergency provider and an emergency department for any items or services not necessary to stabilize the patient under at least one of the following:

- 1) The items or services are determined to be medically necessary to treat the illness that led the patient to believe that he had an emergency medical condition, and that a reasonable patient would expect to receive such items or services from a physician at the time of presentation; or
- 2) The items or services are determined to be medically necessary by the emergency provider, if the emergency department:
 - (A) After a documented good faith effort, is unable to reach the enrollee's health plan:
 - (i) Within thirty minutes from the initial examination of the enrollee; or
 - (ii) If the enrollee needs to be stabilized, within thirty minutes of stabilization;
 - (B) Has successfully contacted the plan as required in subparagraph (A), and has not received a denial from the plan within thirty minutes of the initial contact, unless the plan is able to document that it has made an unsuccessful good faith effort to reach the ER department within 30 minutes after receiving the request for authorization; or
 - (C) Has successfully contacted the plan and has received a denial from a person other than a participating physician and:
 - (i) A participating physician authorized by the plan to review denials reverses the denial; or
 - (ii) A participating physician authorized by the plan to review denials fails to communicate a determination affirming the denial, (unless the treating physician waives the requirement for such determination), within 30 minutes after the initial denial is communicated by the plan.

A health plan shall immediately arrange for an alternate plan of treatment for the member if a non-participating emergency provider and the plan are unable to reach agreement on services necessary beyond those immediately needed to stabilize the member, under which:

- (A) A participating physician with privileges at the hospital arrives at the emergency department of the hospital promptly and assumes responsibility for the treatment of the member; or
- (B) With the agreement of the treating physician or another health professional in the emergency department:
 - (i) Arrangement is made for transfer of the member to another facility using medical resources consistent with the condition of the enrollee;
 - (ii) An appointment is made with a participating physician or provider for treatment needed by the enrollee; or
 - (iii) Another arrangement is made for treatment of the enrollee.

Enrollee participation in treatment decisions

An enrollee shall have the right to be informed fully prior to making any decisions about treatment, benefit, or non-treatment. In order to inform enrollees fully, the provider shall:

- 1) Discuss all treatment options with an enrollee and include the option of no treatment at all;
- 2) Ensure that persons with disabilities have an effective means of communication with the provider and other members of the managed care plan; and
- 3) Discuss all risks, benefits, and consequences to treatment and non-treatment; and
- 4) Discuss with the enrollee and the enrollee's immediate family both living wills and durable powers of attorney in relation to medical treatment.

[NOTE: The HMA has concerns with the vague nature of this section and is working through the legislative process to have the informed consent law clarified.]

Ban on Physician "Gag Orders:"

A plan is prohibited from imposing any type of prohibition, disincentive, penalty, or other negative treatment upon a provider for discussing or providing any information regarding treatment options and medically necessary or appropriate care, including no treatment, even if the information relates to services or benefits not provided by the plan.

Complaints and appeals procedure for enrollees

Plan's Internal Appeals Procedures

- 1) All plans shall establish and maintain a procedure to provide for the resolution of enrollees' complaints and appeals. The procedures shall be reasonably understandable to the average layperson

and shall be provided in languages other than English upon request.

- 2) A plan shall send notice of its final internal determination to the enrollee, the enrollee's appointed representative, if applicable, and the commissioner.

External Appeals Procedures

After exhausting a plan's internal complaint and appeal process, an enrollee, or the enrollee's treating provider or appointed representative, may appeal an adverse decision of a plan to a three-member review panel appointed by the commissioner. The panel is to be composed of a representative from a health plan not involved in the complaint, a provider licensed to practice and practicing medicine in Hawaii not involved in the complaint, and the commissioner or the commissioner's designee.

- 1) The enrollee shall submit a request for review to the commissioner within 30 days from the date of the final determination by the plan;
- 2) Upon receipt of the request and upon a showing of good cause, the commissioner shall appoint the members of the panel. If the amount in controversy is less than \$500, the commissioner may conduct a review hearing without appointing a review panel;
- 3) The review hearing shall be conducted as soon as practicable, taking into consideration the medical exigencies of the cases, provided that the hearing shall be held no later than sixty days from the date of the request for the hearing;
- 4) The commissioner may retain an independent medical expert trained in the field of medicine most appropriately related to the matter under review;
- 5) After considering the enrollee's complaint, the plan's response, and any affidavits filed by the parties, the commissioner may dismiss the appeal if it is determined that the appeal is frivolous or without merit;
- 6) The review panel shall review every adverse determination to determine whether or not the plan involved acted reasonably and with sound medical judgment. The review panel shall consider the clinical standards of the plan, the information provided, the attending physician's recommendation, and generally accepted practice guidelines;
- 7) The commissioner, upon a majority vote of the panel, shall issue an order affirming, modifying or reversing the decision within thirty days of the hearing;
- 8) Members of the review panel shall be granted immunity from liability and damages relating to their duties on the panel.

Information to enrollees

A managed care plan shall provide to its enrollees upon enrollment and thereafter upon request the following information:

- 1) A list of participating providers which shall be updated on a regular basis indicating, at a minimum, their specialty and whether the provider is accepting new patients;
- 2) A complete description of benefits, services, and copayments;
- 3) A statement on an enrollee's rights, responsibilities, and obligations;
- 4) An explanation of the referral process, if any;
- 5) Where services or benefits may be obtained;
- 6) Information on the plan's complaints and appeals procedures;

Every managed care plan shall provide to the commissioner and its enrollees notice of any material change in participating provider agreements, services or benefits, if the change affects the organization or operation of the managed care plan and the enrollee's services or benefits. The plan shall provide notice to enrollees not more than sixty days after the change in a form that makes the notice clear and conspicuous so that it is readily noticeable by the enrollee. A plan shall provide generic participating provider contracts to enrollees, upon request.

Utilization review

Every plan shall establish procedures for continuous review of quality of care, performance of providers, utilization of health services, facilities, and costs.

Managed care plan performance measurement and data reporting standards

All managed care plans shall adopt and comply with nationally developed and promulgated standards for measuring quality, outcomes, access, satisfaction, and utilization of services. Every contract between a managed care plan and a participating provider shall require the provider to comply with the plan's requests for any information necessary for the plan to comply with the data reporting requirements of the law.

Accreditation of managed care plans

Beginning January 1, 1999, the commissioner shall contract with one or more certified vendors of the consumer assessment health plan survey to conduct a survey of all plans actively offering managed care plans in the state. The purpose of the survey is to provide plans with an opportunity to learn whether any deficiencies exist or any improvements are required; provided that the information collected shall be kept confidential in the first year, and thereafter shall be available to the public.

All plans in the state must either be accredited by January 1, 2000 or they must submit a plan to the commissioner to achieve national accreditation status within five years.

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Physicians' Responsibilities Under Hawaii's New Uniform Health Care Decision Law

On July 1, 1999 Governor Cayetano signed into law ACT 169 which creates a comprehensive, modified uniform health care decisions act. ACT 169 repeals current laws on Medical Treatment Decisions ("Living Will") and Power of Attorney for Health Care Decisions and consolidates them into a single statute. The following information describes physicians' responsibilities under the new law. *This document is intended as an informational guide only and not as legal advice.* For a complete copy of the law, please contact Heidi Singh, Director of Legislative/Gov't Affairs, at 536-7702, ext. 2241 or hysingh@juno.com.

Definitions

Advance Health Care Directive ("Living Will"): an individual instruction or a power of attorney for health care.

Agent: an individual designated in a power of attorney for health care to make a health care decision for the individual granting the power.

Guardian: a judicially appointed guardian or conservator having authority to make a health care decision for an individual.

Primary Physician: a physician designated by an individual or the individual's agent, guardian, or surrogate, to have primary responsibility for the individual's health care or, in the absence of a designation or if the designated physician is not reasonably available, a physician who undertakes the responsibility.

Supervising Health Care Provider: the primary physician or the physician's designee, or the health care provider or the provider's designee who has undertaken primary responsibility for an individual's health care.

Surrogate: an individual, other than a patient's agent or guardian, authorized by this act to make a health care decision for an individual.

Physician Responsibilities

A determination that an individual lacks the capacity, or has another condition that affects an individual instruction or the authority of an agent, shall be made by the primary physician, unless otherwise specified in a written advance health care directive. *A health care provider or institution may not require or prohibit the execution of an advance directive as a condition of providing care.*

Revocation of advance health-care directive:

a) An individual may revoke the designation of an agent only by a signed written statement or by personally informing the supervising health-care provider.

b) An individual may revoke all or part of an advance health care directive, other than the designation of an agent, at any time and in any manner that communicates an intent to revoke.

c) A health care provider, agent, guardian, or surrogate who is informed of a revocation shall promptly communicate the fact of the revocation to the supervising health care provider and to any health care institution at which the patient is receiving care.

d) A decree of annulment, divorce, dissolution of marriage, or legal separation revokes a previous designation of a spouse as agent unless otherwise specified in the decree or in a power of attorney for health care.

e) An advance health care directive that conflicts with an earlier advance health care directive revokes the earlier directive to the extent of the conflict.

Surrogate Health Care Decisions:

a) A patient may designate or disqualify any individual to act as a surrogate by personally informing the supervising health care provider. In the absence of such designation, or if the designee is not reasonably available, a surrogate may be appointed to make a health care decision for the patient.

b) A surrogate may make a health care decision for a patient who is an adult or emancipated minor if the patient has been determined by the primary physician to lack capacity and no agent or guardian has been appointed or the agent or guardian is not reasonably available. Upon a determination that a patient lacks decisional capacity to provide informed consent to or refusal of medical treatment, the primary physician or the physician's designee shall make reasonable efforts to notify the patient of the patient's lack of capacity. The primary physician or the physician's designee shall make reasonable efforts to locate as many interested persons as practicable, and the primary physician may rely on such individuals to notify other family members or interested persons.

c) Upon locating interested persons, the primary physician, or the

physician's designee, shall inform such person of the patient's lack of decisional capacity and that a surrogate decision-maker should be selected for the patient.

d) Interested persons shall make reasonable efforts to reach a consensus as to who among them shall make health care decisions on behalf of the patient. The person selected to act as the patient's surrogate should be the person who has a close relationship with the patient and who is the most likely to be currently informed of the patient's wishes regarding health care decisions. If any of the interested persons disagrees with the selection or the decision of the surrogate, or, if after reasonable efforts the interested person are unable to reach a consensus as to who should act as the surrogate decision-maker, then any of the interested persons may seek guardianship of the patient by initiating guardianship proceedings pursuant to chapter 551. Only interested persons involved in the discussions to choose a surrogate may initiate such proceedings with regard to the patient.

e) If any interested person, the guardian, or primary physician believes the patient has regained decisional capacity, the primary physician shall reexamine the patient and determine whether or not the patient has regained decisional capacity and shall enter a decision and the basis for such decision in the patient's medical record and shall notify the patient, the surrogate decision-maker and the person who initiated the redetermination of decisional capacity.

f) A surrogate who has been designated by the patient may make health care decisions for the patient that the patient could make on the patient's own behalf.

g) A surrogate who has not been designated by the patient may make all health care decisions for the patient that the patient could make on the patient's own behalf, except that ***artificial nutrition and hydration may be withheld or withdrawn for a patient upon a decision of the surrogate only when the primary physician and a second independent physician certify in the patient's medical records that the provision or continuation of artificial nutrition or hydration is merely prolonging the act of dying and the patient is highly unlikely to have any neurological response in the future.***

The surrogate who has not been designated by the patient shall make health care decisions for the patient based on the wishes of the patient, or, if the wishes of the patient are unknown or unclear, in the patient's best interest.

The decision of a surrogate who has not been designated by the patient regarding whether life-sustaining procedures should be provided, withheld, or withdrawn shall not be based, in whole or in part, on either a patient's preexisting, long-term mental or physical disability, or a patient's economic status. A surrogate who has not been designated by the patient shall inform the patient, to the extent possible, of the proposed procedure and the fact that someone else is authorized to make a decision regarding that procedure.

h) A health care decision made by a surrogate for a patient is effective without judicial approval.

i) *A supervising health care provider shall require a surrogate to*

provide a written declaration under the penalty of false swearing stating facts and circumstances reasonably sufficient to establish the claimed authority.

Decisions by a Guardian:

a) A guardian shall comply with the ward's individual instructions and shall not revoke the ward's pre-incapacity advance health care directive unless expressly authorized by a court.

b) Absent a court order to the contrary, a health care decision of an agent takes precedence over that of a guardian.

c) A health care decision made by a guardian for the ward is effective without judicial approval.

Obligations of Health Care Provider:

a) Before implementing a health care decision made for a patient, a supervising health care provider, if possible, shall promptly communicate to the patient the decision made and the identity of the person making the decision.

b) A supervising health care provider who knows of the existence of an advance health care directive, a revocation of an advance health care directive, or a designation or disqualification of a surrogate, shall promptly record its existence in the patient's health care record, and if it is in writing, shall request a copy. If one is furnished, the provider shall arrange for its maintenance in the health care record.

c) A supervising health care provider who makes or is informed of a determination that a patient lacks or has recovered capacity, or that another condition exists which affects an individual instruction or the authority of an agent, guardian or surrogate, shall promptly record the determination in the patient's health care record and communicate the determination to the patient, if possible, and to any person then authorized to make health-care decisions for the patient.

d) Except as provided in subsections (e) and (f), a health care provider or institution providing care to a patient shall:

1) Comply with an individual instruction of the patient and with a reasonable interpretation of that instruction made by a person then authorized to make health decisions for the patient.

2) Comply with a health care decision for the patient made by a person then authorized to make health care decisions for the patient to the same extent as if the decision had been made by the patient while having capacity.

e) A health care provider may decline to comply with an individual instruction or health care decision for reasons of conscience. A health care institution may decline to comply with an individual instruction or health care decision if the instruction or decision is contrary to a policy of the institution which is expressly based on reasons of conscience and if the policy was timely communicated to the patient or to a person then authorized to make health care decisions for the patient.

f) A health care provider or institution may decline to comply with an individual instruction or health care decision that requires medi-

cally ineffective health care or health care contrary to generally accepted health care standards applicable to the health care provider or institution.

g) A health care provider or institution that declines to comply with an individual instruction or health care decision shall:

1) Promptly inform the patient, if possible, and any person then authorized to make health care decisions for the patient;

2) Provide continuing care to the patient until a transfer can be effected; and

3) Unless the patient or person then authorized to make health care decisions for the patient refuses assistance, immediately make all reasonable efforts to assist in the transfer of the patient to another health care provider or institution that is willing to comply with the instruction or decision.

h) A health care provider or institution may not require or prohibit the execution or revocation of an advance health care directive as a condition for providing health care.

Health Care Information

Unless otherwise specified in an advance health care directive, a person then authorized to make health care decisions for a patient has the same rights as the patient to request, receive, examine, copy, and consent to the disclosure of medical or any other health care information.

Immunities

a) A health care provider or institution acting in good faith and in accordance with generally accepted health care standards applicable to the health care provider or institution shall not be subject to civil or criminal liability or to discipline for unprofessional conduct for:

1) Complying with a health care decision of a person apparently having authority to make a health care decision for a patient, including a decision to withhold or withdraw health care;

2) Declining to comply with a health care decision of a person based on a belief that the person then lacked authority; or

3) Complying with an advance health care directive and assuming that the directive was valid when made and has not been revoked or terminated.

Statutory Damages

a) A health care provider or institution that intentionally violates this chapter shall be subject to liability to the individual or the individual's estate for damages of \$500 or actual damages resulting from the violation, whichever is greater, plus reasonable attorney's fees.

b) Anyone who intentionally falsifies, forges, conceals, defaces, or obliterates an individual's advance health care directive without the individual's consent, or who coerces or fraudulently induces an individual to give, revoke, or not to give an advance health care directive, shall be subject to liability to that individual for damages of \$2,500 or actual damages resulting from this action, whichever is greater, plus reasonable attorney's fees.

Other

This chapter shall not:

a) authorize mercy killing, assisted suicide, euthanasia, or the provision, withholding, or withdrawal of health care, to the extent prohibited by other statutes of the state.

b) authorize or require a health care provider or institution to provide health care contrary to generally accepted health care standards applicable to the health care provider or institution.

c) shall not authorize an agent or surrogate to consent to the admission of an individual to a psychiatric facility as defined in chapter 334, unless the individual's written advance health care directive expressly so provides.

d) shall not affect other statutes of the state governing treatment for mental illness of an individual involuntarily committed to a psychiatric facility.

e) shall not apply to a patient diagnosed as pregnant by the attending physician.

LOCOID LIPOCREAM[®] Cream

(hydrocortisone butyrate 0.1%)

Effective Management of Inflammatory Skin Disease

Locoid Lipocream therapy features a patented, scientific base consisting of nearly 70% oil dispersed in 30% water, effective in dry, chronic conditions.

This vehicle provides the occlusive properties of an ointment, yet maintains the cosmetic appeal of a cream.

Locoid Lipocream demonstrated efficacy in over 20 clinical studies worldwide involving over 1600 patients.*

The Locoid Lipocream vehicle is also available as the OTC formulation SBR-Lipocream.

Distributed by: FERNDAL PHARMA,
A Division of FERNDAL LABORATORIES, INC.
Ferndale, Michigan 48220 USA



Locoid Lipocream® Cream

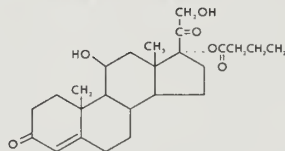
(hydrocortisone butyrate 0.1%)

For Dermatological Use Only

DESCRIPTION

LOCOID Lipocream® Cream contains the topical corticosteroid hydrocortisone butyrate, a hydrocortisone ester. It has the chemical name: (11β)-11,21-dihydroxy-17-[(1-oxobutyl)oxy]-pregn-4-ene-3,20-dione; the molecular formula: C₂₇H₄₆O₆; the molecular weight: 432.54, and the CAS registry number: 13609-67-1. The structural formula is:

LOCOID Lipocream® Cream



Each gram of LOCOID Lipocream® Cream contains 1 mg of hydrocortisone butyrate in a hydrophilic base consisting of cetostearyl alcohol, ceteth-20, mineral oil, white petrolatum, citric acid, sodium citrate, propyl paraben and butyl paraben (preservatives) and purified water.

CLINICAL PHARMACOLOGY

Topical corticosteroids share anti-inflammatory, anti-pruritic and vasoconstrictive actions. The mechanism of anti-inflammatory activity of topical corticosteroids is unclear. Various laboratory methods, including vasoconstrictor assays, are used to compare and predict potencies and/or clinical efficacies of topical corticosteroids. There is some evidence to suggest that a recognizable correlation exists between vasoconstrictor potency and therapeutic efficacy in man.

PHARMACOKINETICS

The extent of percutaneous absorption of topical corticosteroids is determined by many factors including the vehicle, the integrity of the epidermal barrier, and the use of occlusive dressings.

Topical corticosteroids can be absorbed from normal intact skin. Inflammation and/or other disease processes in the skin increase percutaneous absorption. Occlusive dressings or widespread application may increase the possibility of hypothalamic-pituitary-adrenal (HPA) axis suppression.

The vasoconstrictor assay showed that LOCOID Lipocream® Cream had a more pronounced skin blanching effect than LOCOID Cream, suggesting greater percutaneous absorption from the former. At the present time, no adequate HPA axis suppression studies have been conducted for LOCOID Lipocream® Cream. Once absorbed through the skin, topical corticosteroids are handled through pharmacokinetic pathways similar to systemically administered corticosteroids. Corticosteroids are bound to plasma proteins in varying degrees.

Corticosteroids are metabolized primarily in the liver and are then excreted by the kidneys. Some of the topical corticosteroids and their metabolites are also excreted into the bile.

INDICATIONS AND USAGE

LOCOID Lipocream® Cream (hydrocortisone butyrate 0.1%) is indicated for the relief of the inflammatory and pruritic manifestations of corticosteroid-responsive dermatoses.

CONTRAINDICATIONS

Topical corticosteroids are contraindicated in those patients with a history of hypersensitivity to any of the components of the preparation.

PRECAUTIONS

General

Systemic absorption of topical corticosteroids has produced reversible HPA axis suppression, manifestations of Cushing's syndrome, hyperglycemia, and glucosuria in some patients. Conditions which increase the risk of systemic toxicity include the application of more potent steroids, use over large surface areas, prolonged use, and the addition of occlusive dressings. Children may absorb proportionally larger amounts of topical corticosteroids and thus be more susceptible to systemic toxicity (See PRECAUTIONS – PEDIATRIC USE). If irritation develops, topical corticosteroids should be discontinued and appropriate therapy instituted. In the presence of dermatological infections, the use of an appropriate antifungal or antibacterial agent should be instituted. If a favorable response does not occur promptly, the corticosteroid should be discontinued until the infection has been adequately controlled.

Information for the Patient

Patients using topical corticosteroids should receive the following information and instructions:

1. This medication is to be used as directed by the physician. It is for external use only. Avoid contact with the eyes.
2. Patients should be advised not to use this medication for any disorder other than for which it was prescribed.
3. The treated skin area should not be bandaged or otherwise covered or wrapped as to be occlusive.
4. Patients should report any signs of local adverse reactions.
5. Parents of pediatric patients should be advised not to use tight-fitting diapers or plastic pants on a child being treated in the diaper area, as these garments may constitute occlusive dressings.

Laboratory Tests

The following tests may be helpful in evaluating the HPA axis suppression:

Urinary free cortisol test
ACTH stimulation test

Carcinogenesis, Mutagenesis, and Impairment of Fertility

Long-term animal studies have not been performed to evaluate the carcinogenic potential or the effect on fertility of topical corticosteroids.

Studies to determine mutagenicity in *Salmonella typhimurium* strains TA98, TA100, and TA92 with prednisolone and hydrocortisone have revealed negative results.

Pregnancy: Teratogenic Effects:

Pregnancy Category C:

Corticosteroids are generally teratogenic in laboratory animals when administered systemically at relatively low dosage levels. Some corticosteroids have been shown to be teratogenic after dermal application in laboratory animals. In teratogenicity studies, topical administration of 1% or 10% hydrocortisone butyrate in an ointment to pregnant Wistar rats (gestational days 6-15) or New Zealand white rabbits (gestational days 6-18) resulted in no teratogenic findings. However, a dose-dependent increase in fetal resorptions was reported in rabbits, and fetal resorptions were observed in rats treated with 10% hydrocortisone butyrate.

The doses given to rats are approximately 8 to 80 times the human topical dose based on a body surface area comparison (assuming 100% absorption). For rabbits, the doses given were approximately 0.2 and 2 times the human topical dose. Increased resorptions were also noted in Wistar rats given subcutaneous administrations of hydrocortisone butyrate (9mg/kg/day, 3 times the human topical dose) on gestational days 9 through 15. In CS mice given subcutaneous administrations of 1mg/kg/day (0.2 times the human topical dose), an increased number of cervical ribs and one fetus with clubbed legs was reported. There are no adequate and well-controlled studies in pregnant women on teratogenic effects from topically applied corticosteroids. Therefore, topical corticosteroids should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus. LOCOID Lipocream® (hydrocortisone butyrate 0.1%) Cream should not be used extensively on pregnant patients, in large amounts, or for longer than two weeks.

Nursing Mothers

It is not known whether topical administration of corticosteroids could result in sufficient systemic absorption to produce detectable quantities in breast milk.

Systemically administered corticosteroids are secreted into breast milk in quantities *not likely to have a deleterious effect on the infant*. Nevertheless, caution should be exercised when topical corticosteroids are administered to a nursing woman.

Pediatric Use

Safety and effectiveness in pediatric patients have not been established.

Pediatric patients may demonstrate greater susceptibility to topical corticosteroid-induced HPA axis suppression and Cushing's syndrome than mature patients because of a larger skin surface area to body weight ratio.

HPA axis suppression, Cushing's syndrome, and intracranial hypertension have been reported in children receiving topical corticosteroids.

Manifestations of adrenal suppression in children include linear growth retardation, delayed weight gain, low plasma cortisol levels, and absence of response to ACTH stimulation. Manifestations of intracranial hypertension include bulging fontanelles, headaches, and bilateral papilledema.

Chronic corticosteroid therapy may interfere with the growth and development of children.

ADVERSE REACTIONS

The following local adverse reactions are reported infrequently with topical corticosteroids but may occur more frequently with the use of occlusive dressings. These reactions are listed in an approximate decreasing order of occurrence: burning, itching, irritation, dryness, folliculitis, hypertrichosis, acneiform eruptions, hypopigmentation, perioral dermatitis, allergic contact dermatitis, maceration of the skin, secondary infection, skin atrophy, striae and miliaria.

OVERDOSAGE

Topically applied corticosteroids can be absorbed in sufficient amounts to produce systemic effects. (See PRECAUTIONS).

DOSAGE AND ADMINISTRATION

LOCOID Lipocream® (hydrocortisone butyrate 0.1%) Cream should be applied to the affected area as a thin film two or three times daily (depending on the severity of the condition) and for no longer than two weeks. If an infection develops, appropriate antimicrobial therapy should be instituted.

HOW SUPPLIED

LOCOID Lipocream® (hydrocortisone butyrate 0.1%) Cream is supplied in tubes containing:
15 g NOC 0496-0821-15
45 g NOC 0496-0821-45

STORAGE

Store at controlled temperature between 59° and 77°F (15° and 25°C).

 Only.

Distributed by:

FERNOALE LABORATORIES, INC.
Ferndale, Michigan 48220 USA

Protected under U.S. Patent

Manufactured by:

Yamanouchi Europe B.V.
Leiderdorp/The Netherlands

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Durable Power of Attorney/Advance Health Care Directive Sample, Optional Forms

On July 1, 1999 Governor Cayetano signed into law ACT 169 which creates a comprehensive, modified uniform health care decisions act. ACT 169 repeals current laws on Medical Treatment Decision ("Living Will") and Power of Attorney for Health Care Decisions and consolidates them into a single statute. The law includes *sample, optional forms* to create a durable power of attorney and an advance health care directive. These forms are attached and may be modified in accordance with your wishes.

PART I: DURABLE POWER OF ATTORNEY

Part I of the sample form is a durable power of attorney in which you may designate another individual (an "agent") to make health care decisions for you should you become incapable of doing so or would like someone else to make those decisions for you now even though you are still capable of doing so.

PART II: ADVANCE HEALTH CARE DIRECTIVE

Part II of the sample form may be used to create an advance health care directive. An advance health care directive allows you to give specific instructions about your care (e.g.; whether or not you want treatment to be withheld or withdrawn, provision of pain relief, artificial nutrition and hydration).

PART III: DONATION OF ORGANS AT DEATH

Part III of the sample form allows you to specify whether or not you want to donate your organs upon your death.

PART IV: PRIMARY PHYSICIAN

Part IV of the sample form allows you to designate a physician to have primary responsibility for your health care.

SIGNING/WITNESSING THE FORM:

Once you complete the form, you must sign and date it in the presence of witnesses by one of two alternatives: 1) Before two adult witnesses neither of whom may be a health care provider, an employee of a health care provider or facility, or the agent. *At least one* of the witnesses cannot be someone who is related to you by blood, marriage, or adoption, nor entitled to any portion of your estate upon your death under any will or codicil existing at the time of execution of the power of attorney for health care or; 2) Before a notary public.

WHO TO GIVE A COPY OF THE FORM TO:

You should give a copy of the signed and completed form to your physician, to any other health care providers you may have, to any health care institution at which you are receiving care, and to any health care agents you have named. You should also talk to the person you have named as agent to make sure that he or she understands your wishes and is willing to have the responsibility of your care.

Act 169 / 1999

Uniform Health Care Decisions Act

Hawaii Revised Statutes

§ -16 Optional form. The following sample form may be used to create an advance health-care directive. This form may be duplicated. This form may be modified to suit the needs of the person, or a completely different form may be used that contains the substance of the following form.

"ADVANCE HEALTH-CARE DIRECTIVE"

Explanation

You have the right to give instructions about your own health care. You also have the right to name someone else to make health care decisions for you. This form lets you do either or both of these things. It also lets you express your wishes regarding the designation of your health care provider. If you use this form, you may complete or modify all or any part of it. You are free to use a different form.

Part 1 of this form is a power of attorney for health care. Part 1 lets you name another individual as agent to make health care decisions for you if you become incapable of making your own decisions or if you want someone else to make those decisions for you now even though you are still capable. You may name an alternate agent to act for you if your first choice is not willing, able, or reasonably available to make decisions for you. Unless related to you, your agent may not be an owner, operator, or employee of a health care institution where you are receiving care. Unless the form you sign limits the authority of your agent, your agent may make all health care decisions for you. This form has a place for you to limit the authority of your agent. You need not limit the authority of your agent if you wish to rely on your agent for all health care decisions that may have to be made. If you choose not to limit the authority of your agent, your agent will have the right to:

- (a) Consent or refuse consent to any care, treatment, service, or procedure to maintain, diagnose, or otherwise affect a physical or mental condition;
- (b) Select or discharge health care providers and institutions;
- (c) Approve or disapprove diagnostic tests, surgical procedures, programs of medication, and orders not to resuscitate; and
- (d) Direct the provision, withholding, or withdrawal of artificial nutrition and hydration and all other forms of health care.

Part 2 of this form lets you give specific instructions about any aspect of your health care. Choices are provided for you to express your wishes regarding the provision, withholding, or withdrawal of treatment to keep you alive, including the provision of artificial nutrition and hydration, as well as the provision of pain relief medication. Space is provided for you to add to the choices you have made or for you to write out any additional wishes.

Part 3 of this form lets you donate your organs upon your death if you so desire.

Part 4 of this form lets you designate a physician to have primary responsibility for your health care.

After completing this form, sign and date the form at the end and have the form witnessed by one of the two alternative methods listed below. Give a copy of the signed and completed form to your physician, to any other health care providers you may have, to any health care institution at which you are receiving care, and to any health care agents you have named. You should talk to the person you have named as agent to make sure that he or she understands your wishes and is willing to take the responsibility.

You have the right to revoke this advance health-care directive or replace this form at any time.

PART 1
DURABLE POWER OF ATTORNEY
FOR HEALTH CARE DECISIONS

(1) **DESIGNATION OF AGENT:** I designate the following individual as my agent to make health care decisions for me:

(name of individual you choose as agent)

(address) (city) (state) (zip code)

(home phone) (work phone)

OPTIONAL: If I revoke my agent's authority or if my agent is not willing, able, or reasonably available to make a health care decision for me, I designate as my first alternate agent:

(name of individual you choose as first alternate agent)

(address) (city) (state) (zip code)

(home phone) (work phone)

OPTIONAL: If I revoke the authority of my agent and first alternate agent or if neither is willing, able, or reasonably available to make a health care decision for me, I designate as my second alternate agent:

(name of individual you choose as second alternate agent)

(address) (city) (state) (zip code)

(home phone) (work phone)

(2) **AGENT'S AUTHORITY:** My agent is authorized to make all health care decisions for me, including decisions to provide, withhold, or withdraw artificial nutrition and hydration, and all other forms of health care to keep me alive, except as I state here:

(Add additional sheets if needed)

(3) **WHEN AGENT'S AUTHORITY BECOMES EFFECTIVE:** My agent's authority becomes effective when my primary physician determines that I am unable to make my own health care decisions unless I mark the following box. If I mark this box [], my agent's authority to make health care decisions for me takes effect immediately.

(4) **AGENT'S OBLIGATION:** My agent shall make health care decisions for me in accordance with this power of attorney for health care, any instructions I give in Part 2 of this form, and my other wishes to the extent known to my agent. To the extent my wishes are unknown, my agent shall make health care decisions for me in accordance with what my agent determines to be in my best interest. In determining my best interest, my agent shall consider my personal values to the extent known to my agent.

(5) **NOMINATION OF GUARDIAN:** If a guardian of my person needs to be appointed for me by a court, I nominate the agent designated in this form. If that agent is not willing, able, or reasonably available to act as guardian, I nominate the alternate agents whom I have named, in the order designated.

PART 2
INSTRUCTIONS FOR HEALTH CARE

If you are satisfied to allow your agent to determine what is best for you in making end-of-life decisions, you need not fill out this part of the form. *If you do fill out this part of the form, you may strike any wording you do not want.*

(6) **END-OF-LIFE DECISIONS:** I direct that my health care providers and others involved in my care provide, withhold, or withdraw treatment in accordance with the choice I have marked below: (Check only one box).

☐ (a) Choice Not To Prolong Life

I do not want my life to be prolonged if (i) I have an incurable and irreversible condition that will result in my death within a relatively short time, (ii) I become unconscious and, to a reasonable degree of medical certainty, I will not regain consciousness, or (iii) the likely risks and burdens of treatment would outweigh the expected benefits, OR

☐ (b) Choice To Prolong Life

I want my life to be prolonged as long as possible within the limits of generally accepted health-care standards.

(7) **ARTIFICIAL NUTRITION AND HYDRATION:** Artificial nutrition and hydration must be provided, withheld or withdrawn in accordance with the choice I have made in paragraph (6) unless I mark the following box. If I mark this box ☐, artificial nutrition and hydration must be provided regardless of my condition and regardless of the choice I have made in paragraph (6).

(8) **RELIEF FROM PAIN:** If I mark this box ☐, I direct that treatment to alleviate pain or discomfort should be provided to me even if it hastens my death.

(9) **OTHER WISHES:** (If you do not agree with any of the optional choices above and wish to write your own, or if you wish to add to the instructions you have given above, you may do so here.) I direct that:

(Add additional sheets if needed.)

PART 3
DONATION OF ORGANS AT DEATH
(OPTIONAL)

(10) Upon my death: (mark applicable box)

☐ (a) I give any needed organs, tissues, or parts,

OR

☐ (b) I give the following organs, tissues, or parts only:

☐ (c) My gift is for the following purposes (strike any of the following you do not want)

(i) Transplant, (ii) Therapy, (iii) Research, (iv) Education

**PART 4
PRIMARY PHYSICIAN
(OPTIONAL)**

(11) I designate the following physician as my primary physician:

(name of physician)

(address) (city) (state) (zip code)

(phone)

OPTIONAL: If the physician I have designated above is not willing, able, or reasonably available to act as my primary physician, I designate the following physician as my primary physician:

(name of physician)

(address) (city) (state) (zip code)

(phone)

(12) **EFFECT OF COPY:** A copy of this form has the same effect as the original.

(13) **SIGNATURES:** Sign and date the form here:

_____ (date)	_____ (sign your name)
_____ (address)	_____ (print your name)
_____ (city) (state)	

(14) **WITNESS:** This power of attorney will not be valid for making health-care decisions unless it is either (a) signed by two qualified adult witnesses who are personally known to you and who are present when you sign or acknowledge your signature; or (b) acknowledged before a notary public in the state.

ALTERNATIVE NO. 1

Witness

I declare under penalty of false swearing pursuant to section 710-1062, Hawaii Revised Statutes, that the principal is personally known to me, that the principal signed or acknowledged this power of attorney in my presence, that the principal appears to be of sound mind and under no duress, fraud, or undue influence, that I am not the person appointed as agent by this document, and that I am not a health care provider, nor an employee of a health care provider or facility. I am not related to the principal by blood, marriage, or adoption, and to the best of my knowledge, I am not entitled to any part of the estate of the principal upon the death of the principal under a will now existing or by operation of law.

(date)

(signature of witness)

(address)

(print name of witness)

(city) (state)

Witness

I declare under penalty of false swearing pursuant to section 710-1062, Hawaii Revised Statutes, that the principal is personally known to me, that the principal signed or acknowledged this power of attorney in my presence, that the principal appears to be of sound mind and under no duress, fraud, or undue influence, that I am not the person appointed as agent by this document, and that I am not a health care provider, nor an employee of a health care provider or facility.

(date)

(signature of witness)

(address)

(print name of witness)

(city) (state)

ALTERNATIVE NO. 2

State of Hawaii

County of _____

On this _____ day of _____, in the year _____, before me,

_____ (insert name of notary public) appeared

_____, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to this instrument, and acknowledged that he or she executed it.

Notary Seal

(Signature of Notary Public)

Frequently Asked Questions (and Answers) About Hawaii's New Uniform Health Care Decisions Act (Modified)

James H. Pietsch JD

Abstract:

The Hawaii Uniform Health Care Decisions Act (Modified) became law, effective July 1, 1999. The Act makes major changes the law pertaining to Advance Directives and surrogate decision-making. While some of the changes seem to be confusing, most practitioners should find the new law helpful in attempting to assure that the rights of their patients to self-determination and autonomy are preserved and their wishes are followed. Using a question and answer format, this article will provide a basic guide to the new law. The "frequently asked questions" and the answers follow a brief overview of the Uniform Health Care Decisions Act. For busy practitioners, a conclusion summarizes key points.

Overview of the New Uniform Health Care Decisions Act (Modified)

There is a new law that makes major changes to Hawaii's laws pertaining to health care decision-making, including advance health care directives and surrogate decision-making. The 1999 Hawaii Session Laws Act 169, effective July 1, 1999, is called the Uniform Health Care Decisions Act (Modified)¹. It repealed Hawaii Revised Statutes (HRS) Chapter 327D (Medical Treatment Decisions) in its entirety and it significantly modified the provisions under HRS Chapter 551D pertaining to the durable power of attorney for health care decisions. Hawaii's version of the Uniform Health Care Decisions Act (UHCDCA) was adapted from the Uniform Act approved by the National Conference on Uniform Laws and by the American Bar Association House of Delegates. The text of Act 169 is included in this edition of the journal.

Even with certain limitations added by the legislature, the act:

1. Acknowledges the right of a competent individual to decide all aspects of his or her own health care in all circumstances.
2. Is comprehensive and enables Hawaii to replace its existing legislation on the subject with a single statute.
3. Is designed to simplify and facilitate the making of advance health care directives

4. Seeks to ensure that an individual's decisions about health care are governed by the individual's own desires concerning the issues to be resolved.

5. Addresses compliance by health care providers and institutions.

6. Includes procedures for the appointment of a surrogate, if needed, and for resolution of disputes, specifically through initiation of guardianship proceedings.

Limitations in the law include the imposition of special rules for decisions by "non-designated" surrogates to withhold or withdraw artificial nutrition and hydration and the inapplicability of the act to a patient diagnosed as pregnant by the attending physician.²

Anecdotal evidence suggests that many health care professionals still do not have a good understanding of the new law and that several specific provisions are problematic. This article is intended to help answer some of the most frequently asked questions. Readers may submit additional questions to the author through the journal for possible inclusion in future editions of the journal.

Frequently Asked Questions

QUESTION # 1

Why was the law changed and why was the Uniform Health Care Decisions Act model used?

Answer

In 1997 the Governor established a Blue Ribbon Panel on Living and Dying With Dignity to explore the issues relating to living and dying in Hawai'i. The panel found that dying has not been managed as well as it could and in 1998 submitted seven recommendations to the governor.³ One of the recommendations was that the content of Advance Directives for Healthcare including Living Wills be made more specific, their use more widespread and their provisions more binding. With respect to patient self-determination, the panel found that most people do not make Advance Directives and even when they are made, a significant percentage of Advance Directives is ignored or not followed by health care providers.⁴ The report went on to indicate that several factors contributed to this situation:

- 1) Existing statutes provide few incentives to execute advance directives;
- 2) They contain few sanctions to encourage compliance; and
- 3) There is no mechanism to determine whether the provisions of the law are being met.

Despite the fact that Advance Directives possess legal status, physicians and health care facilities continue to be influenced by their own

James H. Pietsch, J.D. is the Director of the University of Hawaii Elder Law Program and teaches health and geriatric law subjects at the William S. Richardson School of Law and the John A. Burns School of Medicine. He was a member of the Governor's Blue Ribbon Committee on Living and Dying With Dignity, serves on several ethics committees, and is a fellow at the Saint Francis International Center for Healthcare Ethics.

opinions of what is in the best interest of the patient or by the demands and desires of family members or other third parties. Too often the patient's own expressed instructions are not reflected in end of life care. Further, the panel found that another difficulty was that statutes regarding end of life care (Medical Treatment Decisions, Durable Power of Attorney for Health Care, Do Not Resuscitate necklaces and bracelets, Surrogate Decision-Makers, Brain Death) are scattered throughout state law."⁵

The 1997 Health Care Decisions By Legal Surrogate Act⁶ created a two-year demonstration project that the legislature felt would protect the health and safety of a person who: (1) Previously had the ability, but who no longer had the ability, to understand the significant benefits, risks, and alternatives to proposed health care, and to make and communicate health care decisions; (2) Resided in a skilled nursing or intermediate care facility; and (3) Had not executed a health care directive for health care decisions which addressed the specific health care decisions presented, at the time, by or to the facility or health care provider; or whose agent was unavailable and whose whereabouts could not be ascertained within a reasonable period of time. This act was incorporated into HRS Chapter 327D and "sunsetted" effective June 30, 1999. The enabling legislation created a task force to study the implementation of the act and to make recommendations for new legislation regarding surrogate decision-making.

The legal issues focus group of the Governor's Blue Ribbon Panel ultimately recommended that Hawai'i consider adopting a version of the Uniform Health Care Decisions Act (UHCDA) which) was adapted from the Uniform Act approved by the National Conference on Uniform Laws and by the American Bar Association House of Delegates. After many months of hearings and deliberations, the Health Care Decisions By Legal Surrogate task force which has been meeting during the same period of time, agreed that utilizing the UHCDA format was the best approach to the issue, in essence following the recommendations that came from the work of the Blue Ribbon Panel. The task force ultimately agreed, however, to recommend significant changes to the surrogate provisions of the UHCDA in order for the bill to go forward. A modified version of the Model UHCDA was submitted to the legislature in the fall of 1998 as part of the Governor's legislative package.

QUESTION # 2

What "Advance Directives" are covered under the UHCDA, what can they include, and is there a standard form?

Answer

The term "Advance Medical Directive," "Advance Health care Directive" or more simply "Advance Directive" (AD), in the broadest sense, applies to all directives, instructions, or even desires that a person may communicate in writing, orally or in some other fashion concerning decisions about one's body. In a stricter sense, ADs can be defined as written documents directing the consent or non consent, application, withdrawal or withholding of medical treatment, or the appointment of a surrogate decision maker. Hawaii law has never required written advance directives although they have been preferred. Each state or territory has different laws on the subject it is often questionable whether an AD executed in one jurisdiction will be recognized in another jurisdiction. (One version

of an AD must, by federal law, be recognized by all states. The Military Advance Medical Directive, if properly executed in accordance with military legal assistance guidelines, must be recognized in every U.S. jurisdiction⁷) There has been some movement toward creating uniformity among the states as is evidenced by enactment of the UHCDA in several jurisdictions, including Hawai'i.

Under the new UHCDA an adult or emancipated minor may make advance health care directives⁸ by giving an "individual instruction"⁹ orally or in writing and/or by executing a power of attorney for health care, which may authorize the agent to make any health care decision the principal could have made while having capacity. The term "living will" is not used in the UHCDA. Copies of a written advance health care directive have the same effect as the original.¹⁰ The new advance directives should be more "portable" than those executed under the old law, especially in jurisdictions that adopt the UHCDA.¹¹

Unless otherwise specified in a power of attorney for health care, the authority of an agent becomes effective only upon a determination that the principal lacks capacity, and ceases to be effective upon a determination that the principal has recovered capacity.¹² An individual may revoke the designation of an agent only by a signed writing or by personally informing the supervising health care provider¹³ but an individual may revoke all or part of an advance health care directive, other than the designation of an agent, at any time and in any manner that communicates an intent to revoke.¹⁴

The new law includes an optional sample form (and explanation) which may be duplicated or modified to suit the needs of the person, or a completely different form may be used that contains the substance of the sample form found in the statute.¹⁵ A sample form with an explanation is found in the copy of the UHCDA which is included in this edition of the journal. The sample optional form was written with the intention that consumers utilize the form without having to seek the assistance of an attorney but the University of Hawai'i Elder Law Program (UHELP)¹⁶ has received numerous comments from clients, physicians and attorneys. Many indicate that the new optional sample form is too long and too complicated, especially for individuals with diminished capacity or limited education. UHELP has developed its own forms for clients with diminished capacity or limited education.

The UHCDA does not include all of the types of advance directives. There are some health care decisions that were not ordinarily addressed by traditional advance directives or by surrogates. Traditional AD's were not very useful or applicable under circumstances where a patient suffers cardiac or respiratory arrest. Of course, surrogate decision-making at the time of such a medical emergency can be difficult. In 1995 a law¹⁷ was passed in Hawai'i which allows a terminally ill person to state in advance that he or she does not want to be resuscitated in an emergency if he or she:

(A) Has been certified in a written "comfort care only" document by the person's physician to be a terminally ill patient of that physician; and

(B) Has certified in the same written "comfort care only" document that the person directs emergency medical services personnel, first responder personnel, and health care providers not to administer chest compression, rescue breathing, electric shocks, or medication, or all of these, given to restart the heart if the person's breathing or heart stops, and directs that the person is to receive care for

comfort only, including oxygen, airway suctioning, splinting of fractures, pain medicine, and other measures required for comfort; and

(C) Has been prescribed by a physician a “comfort care only—do-not-resuscitate” (CCO-DNR) identifying bracelet or necklace. The written document containing both certifications must be signed by the patient with the terminal condition, by the patient’s physician, and by any one other adult person who personally knows the patient.

The UHCDA does not specifically cover the decision to accept or refuse the administration of psychotropic drugs by a health care provider for a psychotic condition. A person suffering from a psychotic condition, but who is competent and in a state of remission at the time of execution may execute a written declaration directing that medical treatment, including the administration of psychotropic drugs, be provided at a time when the person has lapsed and “lacks sufficient understanding to make or communicate responsible medical treatment decisions.”¹⁸

QUESTION # 3

Are Advance Directives executed under the old law still “valid?”

Answer

Yes, but the old documents may impose unnecessary limitations on the choices available to patients and may be less clear than advance directives executed under the UHCDA. Health care providers should encourage patients to consider making new advance directives under the new law.

The old “living will” law¹⁹ provided that any competent person who had attained the age of majority could execute a declaration directing the provision, continuation, withholding, or withdrawal of life-sustaining procedures under certain conditions, such as a terminal condition or where the patient had a permanent loss of ability to communicate with others due to irreversible brain injury or coma. An attending physician who was notified of the existence of such a declaration had a duty to make a determination of whether the patient’s condition corresponded to the directions in the declaration and, if so, to make a written certification of such a finding in the patient’s medical record.²⁰ Under the old law, physicians were sometimes reluctant to certify that the patient was in such a condition and had “no reasonable chance of regaining this ability.”

The old durable power of attorney for health care law²¹ had numerous limitations and was difficult for many people to execute. A competent person who had attained the age of majority could execute a durable power of attorney authorizing an agent to make any lawful health care decisions that could have been made by the principal at the time of election.²² The execution requirements for making a durable power of attorney for health care under the old law were, however, somewhat restrictive.²³

The old law also included a provision which stated that “a durable power of attorney for health care decisions is presumed not to grant authority to decide that the principal’s life should not be prolonged through surgery, resuscitation, life-sustaining medicine or procedures, or the provision of nutrition or hydration unless such authority is explicitly stated.”²⁴ It was not sufficient under the old law to use a phrase such as “I grant all powers relating to my health care.” The new UHCDA permits such a broad grant of powers. The old law specifically mentioned that a durable power of attorney for health

care decisions was only effective during the period of incapacity of the principal as determined by a licensed physician.²⁵ As discussed in question # 2, this, too, is changed under the UHCDA.

QUESTION # 4

How is a “surrogate” appointed and what powers do they have when a patient no longer has the ability to make health care decisions and there is no guardian or agent under a health care power of attorney?

Answer

Under the UHCDA a surrogate may make a health care decision for a patient if the patient lacks capacity²⁶ and no agent or guardian has been appointed or the agent or guardian is not available. A patient may designate or disqualify any individual to act as a surrogate by personally informing the supervising health care provider.²⁷ How the patient is to personally inform the supervising health care provider is not spelled out in the act. It is obvious that a patient may orally inform the supervising health care professional. The designation or disqualification may be made in writing. Section 7 of the act requires a supervising health care provider who knows of the existence of an advance health care directive, revocation of an advance health care directive, or designation or disqualification of a surrogate to “promptly record its existence in a patient’s health care record and, if it is in writing, (emphasis added) shall request a copy and if one is furnished shall arrange for its maintenance in the health care record. Further, Section 12 of the act provides that “a copy of a written advance health care directive, or designation or disqualification of a surrogate (emphasis added) has the same effect as the original.”

In the absence of a designation by the patient of a surrogate, or if the designee is not reasonably available, a surrogate may be appointed to make a health care decision for the patient.²⁸ Unlike the Model Act approved by the National Conference on Uniform Laws, Hawaii’s version of the UHCDA does not provide for a common family hierarchy of decision makers for a decisionally incapacitated patient but, rather, provides for decision-making by surrogates selected from a group of “interested persons.”²⁹ Under the new law “interested persons” means the patient’s spouse, unless legally separated or estranged, a reciprocal beneficiary, any adult child, either parent of the patient, an adult sibling or adult grandchild of the patient, or any adult who has exhibited special care and concern for the patient and who is familiar with the patient’s personal values.³⁰ The UHCDA places a big burden on health care providers with respect to the selection of a surrogate. This seems to be the most difficult area for families and physicians, especially when there is family dissension. To make certain that the practitioner knows the process Section 5 of the Act is set out below:

“...Upon a determination that a patient lacks decisional capacity to provide informed consent to or refusal of medical treatment, the primary physician or the physician’s designee shall make reasonable efforts to notify the patient of the patient’s lack of capacity. The primary physician, or the physician’s designee, shall make reasonable efforts to locate as many interested persons as practicable, and the primary physician may rely on such individuals to notify other family members or interested persons.

(c) Upon locating interested persons, the primary physician, or the

physician's designee, shall inform such persons of the patient's lack of decisional capacity and that a surrogate decision-maker should be selected for the patient.

(d) Interested persons shall make reasonable efforts to reach a consensus as to who among them shall make health care decisions on behalf of the patient. The person selected to act as the patient's surrogate should be the person who has a close relationship with the patient and who is the most likely to be currently informed of the patient's wishes regarding health care decisions. If any of the interested persons disagrees with the selection or the decision of the surrogate, or, if after reasonable efforts the interested persons are unable to reach a consensus as to who should act as the surrogate decision-maker, then any of the interested persons may seek guardianship of the patient by initiating guardianship proceedings pursuant to chapter 551. Only interested persons involved in the discussions to choose a surrogate may initiate such proceedings with regard to the patient..."

There have already been suggestions to change the UHCDA and adopt provisions recommended by the legal aspects focus group of the Governor's Blue Ribbon Panel and originally considered by the surrogate decision committee.³¹

Since the patient can designate or disqualify a surrogate, "interested persons" can be "trumped" by an orally designated surrogate. In the same manner a patient may orally disqualify someone who otherwise would be entitled to make decisions on behalf of the patient. Under Hawai'i's version of the UHCDA, whether the surrogate is "designated" or "non-designated" the supervising health care provider must require a surrogate to provide a written declaration under the penalty of false swearing stating facts and circumstances reasonably sufficient to establish the claimed authority.³²

There are restrictions on decisions by "non-designated surrogates. Artificial nutrition and hydration may be withheld or withdrawn upon a decision by the surrogate only when the primary physician and a second independent physician certify in the patient's medical records that the provision of artificial nutrition or hydration is merely prolonging the act of dying and that the patient is highly unlikely to have any neurological response in the future."³³ This particular provision should encourage practitioners to emphasize the importance of personally designating an agent or surrogate.

QUESTION # 5

Are there any general parameters or limitations set out under the new law?

Answer

Yes. Section -13—Effect of this chapter—provides overall guidance. First of all, the UHCDA does not create a presumption concerning the intention of an individual who has not made or who has revoked an advance health care directive.

Death resulting from the withholding or withdrawal of health care in accordance with the UHCDA does not for any purpose constitute a suicide or homicide or legally impair or invalidate a policy of insurance or an annuity providing a death benefit, notwithstanding any term of the policy or annuity to the contrary.

The UHCDA does not authorize mercy killing, assisted suicide, euthanasia, or the provision, withholding, or withdrawal of health care, to the extent prohibited by other statutes of this State.

The UHCDA does not authorize or require a health care provider or institution to provide health care contrary to generally accepted health care standards applicable to the health care provider or institution.

The UHCDA does not authorize an agent or surrogate to consent to the admission of an individual to a psychiatric facility as defined in chapter 334, unless the individual's written advance health care directive expressly so provides.

The UHCDA does not affect other statutes of this State governing treatment for mental illness of an individual involuntarily committed to a psychiatric facility.

What seems to be an unfortunate placement of a provision states that the UHCDA does not apply to a patient diagnosed as pregnant by the attending physician. Such an overall inapplicability would probably be found to be unconstitutional. Pregnant women continue to have a constitutional right to make health care decisions.

QUESTION # 6

Are there penalties for not following the law and are there immunities for following the directions of authorized decision-makers when there is a conflict?

Answer

The UHCDA requires health care providers to follow the instructions of patients, agents and surrogates. Unless otherwise specified in an advance health care directive, the guardian, agent or surrogate has the same right as the patient to request, receive, examine, copy and consent to the disclosure of medical or any other health care information.³⁴ Unless it requires medically ineffective health care or health care contrary to generally accepted health care standards, the UHCDA requires a health care provider or institution to comply with an individual instruction of a patient and with a reasonable interpretation of the instruction made by a person then authorized to make health care decisions for the patient.³⁵ The same section of the law requires that a health care provider to comply with a health care decision for the patient made by a person then authorized to make health care decisions for the patient to the same extent as if the decision had been made by the patient while having capacity.³⁶ A health care provider may decline to comply with an individual instruction or health care decision for reasons of conscience or stated policy but has certain continuing obligations to the patient³⁷.

The UHCDA includes both civil and criminal sanctions. A health care provider or institution that intentionally violates this chapter is subject to liability to the individual or the individual's estate for damages of \$500 or actual damages resulting from the violation, whichever is greater, plus reasonable attorney's fees.³⁸ Also, patients, agent's, guardians, surrogates and health care providers or institutions may seek judicial relief to enjoin or direct a health care decision or other equitable relief.³⁹ Proceedings are governed by part 3 of article V of chapter 560 (Guardians of the Person of Incapacitated Persons).

On the positive side, the UHCDA includes certain immunities. A health care provider or institution acting in good faith and in accordance with generally accepted health care standards applicable to the health care provider or institution will not be subject to civil or criminal liability or to discipline for unprofessional conduct for complying with a health care decision of a person apparently having

authority to make a health care decision for a patient, including a decision to withhold or withdraw health care; declining to comply with a health care decision of a person based on a belief that the person then lacked authority; or complying with an advance health care directive and assuming that the directive was valid when made and has not been revoked or terminated.⁴⁰

Conclusion

The Uniform Health Care Decisions Act (Modified) has been in effect since July 1, 1999. It replaces existing legislation on medical treatment decisions, health care powers of attorney and health care decisions by legal surrogates. The UHCDA acknowledges the right of a competent individual to decide all aspects of his or her own health care, simplifies and facilitates the making of advance health care directives, authorizes the designation of surrogate decision-makers in the event that a patient lacks decisional capacity and does not have a guardian or health care agent, addresses compliance by health care providers and institutions and provides procedures for dispute resolution.

The UHCDA applies in all health care settings, including hospitals, nursing homes and other institutions, as well as community and outpatient settings. The new law includes safeguards to protect both patients and health care providers. The UHCDA places new responsibilities on health care providers to follow advance directives and to obtain documentation of claimed authority of surrogates.

The UHCDA makes it especially important for patients to consider executing written advance directives. These can include an "individual instruction" (formerly referred to as the "Living Will"), and a health care power of attorney. The new law makes it much easier to execute an advance directive. Copies of these documents should be filed in the patient's medical record.

For patients who have an "old" advance directive, they should check its currency, taking into consideration when was it executed, its clarity and whether it still reflects the patient's wishes. If a new advance directive is desired, health care providers may want to give them a copy of the sample optional form and explanation, and encourage them to individualize it.

In an emergency, in the absence of a formal document, supervising health care providers should ask patients to designate a surrogate and annotate this designation in the patient's medical record.

References

- At the time this article was written, it appeared that the UHCDA (Modified) was to be designated as Chapter 327E of the Hawaii Revised Statutes.
- Section 13 (g) Act 169, 1999 Hawaii State Legislature. Also see question # 5.
- Final Report of the Governor's Blue Ribbon Panel on Living and Dying with Dignity, May 1998
- Report and Recommendations-Advance Directives and Living Wills, Final Report of the Governor's Blue Ribbon Panel on Living and Dying with Dignity, May 1998
- Report and Recommendations-Advance Directives and Living Wills, Final Report of the Governor's Blue Ribbon Panel on Living and Dying with Dignity, May 1998
- Act 332, 1997 Hawaii State Legislature.
- On February 10, 1996, President Clinton signed the "National Defense Authorization Act for Fiscal Year 1996." Section 749 of the Act requires states to recognize advance medical directives that are prepared by attorneys who are authorized to provide legal assistance for individuals who are eligible to receive legal assistance to the same extent as an advance medical directive "prepared and executed in accordance with the laws of the state concerned." This section is codified at 10 U.S.C. § 1044c.
- Section 3, Act 169, Hawaii State Legislature
- Section 2 Definitions: "Individual Instruction" means an individual's direction concerning a health care decision for the individual.
- Section 12, Act 169, 1999 Hawaii State Legislature-Effect of copy.
- Section 3(j), Act 169, 1999 Hawaii State Legislature An advance health care directive shall be valid for purposes of this chapter if it complies with this chapter, or if it was executed in compliance with the laws of the state where it was executed
- Section 3(e), Act 169, 1999 Hawaii State Legislature
- Section 4(a), Act 169, 1999 Hawaii State Legislature
- Section 4(b), Act 169, 1999 Hawaii State Legislature
- Section 16, Act 169, 1999 Hawaii State Legislature. Several different sample forms (and Explanations) have been developed by the University of Hawaii Elder Law Program (UHELP) to address specific concerns, needs and abilities of its diverse clients. The sample form in the statute seems to be difficult for many clients, and especially clients with limited education or limited ability to read or concentrate.
- The University of Hawaii Elder Law Program (UHELP) now housed at the Law School has been in existence for eighteen years, first at the Legal Aid Society and for the past eight years, at the University of Hawaii. As part of the Law School, provides direct legal services, advocacy, education, training, research, and even proposing legislation to better the lives of older persons in Hawaii.
- See Haw. Rev. Stat. 321-229.50. Rapid identification document.
- See HAW. REV. STAT. § HRS 327F.
- HAW. REV. STAT. CHAP 327D Medical Treatment Decisions (First enacted in 1986, amended periodically and subsequently repealed, effective July 1, 1999)
- See HAW. REV. STAT. § 327D-10. (Repealed as of June 30, 1999)
- See HAW. REV. STAT. § 551D-2.5(a). (Repealed as of June 30, 1999)
- HAW. REV. STAT. § 551D-2.5(a) (Repealed as of June 30, 1999)
- HAW. REV. STAT. § 551D-2.5(b) (Repealed as of June 30, 1999) The Durable Power of Attorney for Health Care :
 - Shall be in writing;
 - Shall be signed by the principal, or by another person in the principal's presence and at the principal's expressed direction;
 - Shall be dated;
 - Shall be signed in the presence of two or more witnesses who:
 - Are at least 18 years of age
 - Are not related to the principal by blood, marriage, adoption; and
 - Are not, at the time that the durable power of attorney is executed, attending physicians, employees of the attending physician, or employees of a health care facility in which the principal is a patient; and
 - Must have all signatures notarized at the same time.
- HAW. REV. STAT. § 551D-2.5(c). (Repealed as of June 30, 1999)
- HAW. REV. STAT. § 551D-2.5(d). (Repealed as of June 30, 1999)
- Section 4(a), Act 169, 1999 Hawaii State Legislature defines "Capacity" as an individual's ability to understand the significant benefits, risks, and alternatives to proposed health care and to make and communicate a health care decision
- Section 5(a), Act 169, 1999 Hawaii State Legislature
- Section 5(b), Act 169, 1999 Hawaii State Legislature
- Section 5(b), Act 169, 1999 Hawaii State Legislature
- Section 2, Act 169, 1999 Hawaii State Legislature
- The original submission included the following wording:
An adult or emancipated minor may designate any individual to act as surrogate by personally informing the supervising health care provider. In the absence of a designation, or if the designee is not reasonably available, any member of the following classes of the patient's family who is reasonably available, in descending order of priority, may act as surrogate:
 - The spouse, unless legally separated;
 - An adult child;
 - A parent; or
 - An adult brother or sister.
- If none of the individuals eligible to act as surrogate under subsection (b) is reasonably available, an adult who has exhibited special care and concern for the patient, who is familiar with the patient's personal values, and who is reasonably available may act as surrogate.
- A surrogate shall communicate his or her assumption of authority as promptly as practicable to the members of the patient's family specified in subsection (b) who can be readily contacted.
- If more than one member of a class assumes authority to act as surrogate, and they do not agree on a health care decision and the supervising health care provider is so informed, the supervising health care provider shall comply with the decision of a majority of the members of that class who have communicated their views to the provider. If the class is evenly divided concerning the health care decision and the supervising health care provider is so informed, that class and all individuals having lower priority are disqualified from making the decision.
- Section 5(i), Act 169, 1999 Hawaii State Legislature
- Section 5(g), Act 169, 1999 Hawaii State Legislature
- Section 8, Act 169, 1999 Hawaii State Legislature-Health care information.
- Section 7 Act 169, 1999 Hawaii State Legislature -Obligations of health care provider.
- Section 1, Act 169 Hawaii State Legislature-Definitions. "Capacity" means an individual's ability to understand the significant benefits, risks, and alternatives to proposed health care and to make and communicate a health care decision.
- In Section 7 Act 169, 1999 Hawaii State Legislature -Obligations of health care provider. (e) A health care provider may decline to comply with an individual instruction or health care decision for reasons of conscience. A health care institution may decline to comply with an individual instruction or health care decision if the instruction or decision is contrary to a policy of the institution which is expressly based on reasons of conscience and if the policy was timely communicated to the patient or to a person then authorized to make health care decisions for the patient.
 - A health care provider or institution may decline to comply with an individual instruction or health care decision that requires medically ineffective health care or health care contrary to generally accepted health care standards applicable to the health care provider or institution.
 - A health care provider or institution that declines to comply with an individual instruction or health care decision shall:
 - Promptly so inform the patient, if possible, and any person then authorized to make health care decisions for the patient;
 - Provide continuing care to the patient until a transfer can be effected; and
 - Unless the patient or person then authorized to make health care decisions for the patient refuses assistance, immediately make all reasonable efforts to assist in the transfer of the patient to another health care provider or institution that is willing to comply with the instruction or decision.
 - A health care provider or institution may not require or prohibit the execution or revocation of advance health care directive as a condition for providing health care.
- Section 10, Act 169, 1999 Hawaii State Legislature-Statutory damages.
- Section 14, Act 169, 1999 Hawaii State Legislature-Judicial relief.
- Section 9, Act 169, 1999 Hawaii State Legislature-Immunities



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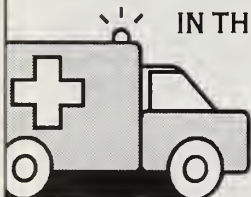


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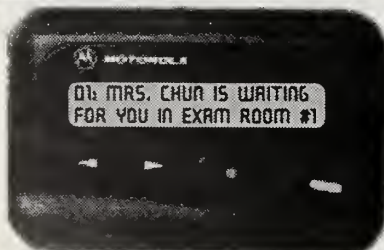
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HMOs came up with a black eye when 1063 doctors and 768 nurses of the Kaiser Foundation responded to a survey to evaluate quality. A whopping 87% of the doctors said they had patients who were denied coverage by health plans. They reported that the patients often eventually got the coverage when the doctors argued enough. However, over half of the doctors and nurses said they were obliged to exaggerate the severity of a patient's medical condition in order to get treatment. Moreover, in a separate report HMOs last year made no progress on advising smokers to quit, on cervical cancer screening or follow-up care for mental illness. The report from the National Committee for Quality Assurance also showed that 27% of patients complained of trouble getting needed care.

Be Careful If You Are Seated On A Standing Committee.

It must be open season on editors as now the Massachusetts Medical Society (MMS) has sacked Jerome P. Kassirer, M.D., editor for eight years of the prestigious *New England Journal of Medicine* (NEJM), in disagreement over "publication policy." The MMS wants to increase their outside income (does this sound familiar), and wants to publish specialty journals using articles rejected by the NEJM. Dr. Kassirer and the publication committee refused, claiming it would diminish the prestige of the present journal, so the MMS said it was time to go. Dr. Kassirer said he was surprised by the decision, but also stated that disagreements had become more intense in the past year. The underlying point, like the catastrophic *Sunbeam* episode with the AMA, is the conflict between commercialism and professionalism. As the old saying goes, "no matter what they are talking about, they're talking about money."

Americans Believe In Trial By Jury - Except When Called To Serve On One.

A star professional basketball player dropped dead at age 27 of cardiac arrhythmia during practice. A cardiologist had previously evaluated him after he collapsed during a game, but stated that the athlete suffered from a neurological condition that caused fainting spells. However, a team of cardiologists had also evaluated the player and stated that he had a life-threatening arrhythmia. Two weeks later the athlete dropped dead, and the widow brought a malpractice suit against the cardiologists. Testimony at trial was prolonged with multiple medical experts, and there the doctor revealed that the athlete stated he was a former cocaine user, and had ignored the doctors' orders. A jury was expected to determine if this is physician neglect, drug abuse, patient neglect, or a combination thereof. They failed and ultimately a mistrial was declared. As Professor Jerome Bettman, M.D. has stated, "A trial is a contest of impressions and has little to do with facts."

Success Comes In Cans; Failure In Cant's

A study in the July *Journal of Internal Medicine* showed that a stamp can do more than deliver the mail. By adding a simple stamp on a patient's chart noting smoking status - "current/former/never" caused the doctor to increase a smoking discussion from 45% to 78% with individual patients. That advice resulted in doubling the number of patients entering cessation programs from 6 to 12%. Or, to put it more simply, unless reminded, we doctors often fail to communicate. (Thanks, J.M.)

None Of The Secrets Of Success Will Work Unless You Do.

While the Hawaii Medical Association, the AMA and other state associations, are struggling to keep members, Texas Medical Association is growing with members and enthusiasm. Why, in this era of hard times? The reason is that the TMA was able to get the Texas Legislature to pass a physician collective bargaining bill. The law explicitly bans physician strikes, boycotts, or slow-downs. The bill is a giant step toward preserving the patient-physician relationship. The law allows self-employed physicians to negotiate collectively with health plans under the supervision of the state attorney general. The Texas statute says negotiations between physicians and health plans are voluntary and non-binding, but in fact HMOs

publicly concede that they would be hard pressed to turn away key physician groups. The U.S. Chamber of Commerce, the National Federation of Independent Business, the National Association of Manufacturers and the American Association of Health Plans all lobbied against the bill. The claim is that fees will go up leading to reduced affordability, access, and coverage. The TMA claims that the law could actually stabilize or even reduce costs because physicians can challenge inane and bureaucratic contract provisions that delay care. What might be the chances of such a bill for Hawaii? Probably, very slim, but what a great membership issue!

All Computer Programs Contain Errors Until Proven Otherwise - Which Is Impossible.

A 42 year old psycho-therapist stopped at the drug store to refill her migraine prescription, but was refused by the pharmacist. The company that manages her benefits decided she was taking too many kinds of medicine. "I felt violated. The company made it look like I was a probable drug addict." Now a new breed of pharmacy benefit managers maintain computerized records in order to recommend less expensive medications, to warn about wrong combination of drugs, and prevent patients from taking a drug longer than recommended. The dispute illustrates some benefits, but also the dangers of computerized medical information. Employers seek more background data, and HMOs want more information. But what about safeguarding privacy? Our befuddled Congress and the Dept. of Health and Human Services are mandated to make federal privacy rules, but so far it is a joke. The public is fed up. A national survey revealed that at least one of six patients fails to complete medical forms, or has used an alias for certain tests, or paid cash to avoid an insurance claim. In Maine a new law prohibits the release of any medical information without written permission from the patient with a fine of \$50,000 for any violation. Hospitals have clammed up, even about confirming an admission, which was more than patients wanted.

It's Not An Optical Illusion, It Just Looks Like One.

In an attempt to provide free vaccines for uninsured children in low-income families, Congress established the Children's Health Insurance Program (CHIP). Federal money was allocated for states to expand Medicaid or create new programs. Exercising the latter option, California set up Healthy Families to provide medical insurance coverage for uninsured kids. However, free vaccines were denied when Secretary Shalala announced that the federal government in its Vaccines for Children plan would provide free vaccines only to uninsured and Medicaid-eligible children. That eliminated the children insured under California's Healthy Families. Is anyone in charge here?

Imhoff's Law Of The Septic Tank - The Really Big Chunks Float To The Top.

The recent prosecution of the Kapiolani Health Plan for Medicaid fraud pointed to the fact that the big cheaters are not at the corner family clinic. The whistle-blower pocketed more than \$600,000 for informing the federal investigators, as the law provides, and in this case it was a nurse close to the scene who reported the sin. But meantime, the Fraud and Abuse teams are busy holding seminars to educate patients on how to read the doctor bill in hopes of catching some unfortunate physician in a billing error. Kapiolani paid the penalty, but no names were mentioned in the multi-million dollar case. No matter what excuse or rationalization the fraud people offer, the plan to turn patients into investigators drives a poisonous stake into the nature of trust and mutual respect necessary to effective medical care.

ADDENDA

- ❖ According to *People for the Ethical Treatment of Animals*, it takes the urine of 75,000 pregnant mares to make a year's supply of Premarin for post-menopausal women.
 - ❖ Many of those people who insist on keeping a gun at home for safety, are the same ones who never fasten a seat belt.
 - ❖ After Oprah did a show on women who fake orgasms, Geraldo had a show about men who fake bowel movements.
- Aloha and keep the faith —rts■

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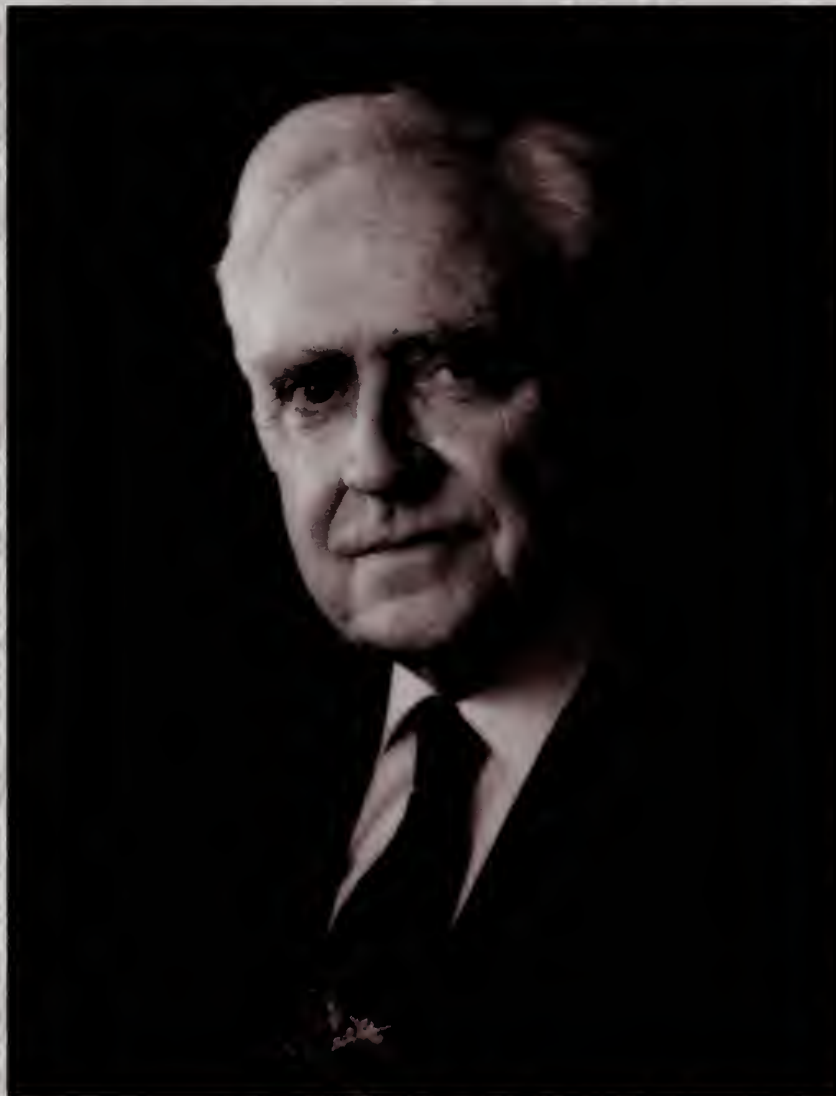
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Special Memorial Issue on
Thomas J. Whelan, Jr. MD
1921 – 1999

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Editorial

Norman Goldstein MD
Editor, Hawaii Medical Journal

Thomas Joseph Whelan, Jr. MD (1921-1999)

Hawaii has been very fortunate to have had the knowledge, experience, and teachings of Tom Whelan for 30 of his 78 years. I was fortunate to have met Tom at an American College of Physicians meeting in San Francisco in 1964. Dr. Mel Chetlin, Chief of Cardiology at Tripler, asked me, as Assistant Chief of Dermatology at Tripler at the time, to meet Colonel Whelan and help convince him to come to Tripler. It didn't take much arm twisting to entice Tom to transfer from Walter Reed General Hospital in Washington DC to Tripler General Hospital.

The rest is history, some of it detailed in this Special Memorial Issue of the Journal with admiration and aloha by his former students, residents, and associates: Bradley Wong MD, Peter Barcia MD, Emmett Aluli MD, Colonel Yeu-Tsu Margaret Lee MD.

Tom Whelan had a phenomenal career in the military, and in civilian/university as well. He was an administrator and a teacher *par excellence*. He helped us bridge the Town & Gown and the military and civilian elements of medicine in Hawaii and the Pacific.

Tom and Norma were blessed with six children (see the family photo on page 309). Daughters Christal, Sharon and Sally share in their love and affection for their Dad in their remembrances and the Eulogy. As Sharon says, her Dad was a real "Mensch." Mahalo for sharing your husband and father with us.

One man can make a difference in our world. Tom Whelan was that man.

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Richard Mamiya MD is another outstanding man who continues to make a difference in Hawaii Medicine.

Thanks to a major contribution from Richard, The Hawaii Medical Library has established a Heritage Center including a Repository for Rare Books; The Archives of the Hawaii Medical Association; Honolulu County Medical Society artifacts and instruments, "oral histories," a photo collection; and files of over 2,500 physicians who have or are currently practicing in Hawaii.

Since the Journal is not able to publish Special Memorial Issues for every worthy physician, the Heritage Center wants to expand its files, and will be contacting you soon for your biography, photos, tapes, etc. to be included in the Mamiya Medical Heritage Center.



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In Memorium

Dr. Thomas Whelan – preeminent surgeon and former Chairman of Surgery, University of Hawaii School of Medicine – died in Honolulu on September 10, 1999, of complications following hip replacement surgery.

A native of Lynn, Massachusetts, Dr. Whelan attended Philips Academy at Andover and received both BA and MD degrees from Yale University. During these years he distinguished himself academically as a scholar cum laude and in the baseball diamond as Yale's Captain in '43. While in medical school he married his high school flame – Norma Gianascol. They were blessed with six children: Sharon, Thomas III, Rosemary, Sally, Christal, and Michael.

After completing his internship and residency in Surgery at Strong Memorial Hospital in Rochester, New York, Dr. Whelan began an illustrious thirty-year career in the U.S. Army Medical Corps. He taught general and vascular surgery while serving as chief of surgery at Walter Reed Army Hospital in Washington D.C., and operated on many dignitaries there including General Douglas MacArthur, Mamie Eisenhower, and Senator Strom Thurmond. He was also assigned by President Johnson to attend to Senator Edward M. Kennedy at Cooley Dickinson Hospital in Northampton, when he was critically wounded in a plane crash.

Dr. Whelan later held the same position at Tripler Medical Center in Hawaii where he was promoted to Brigadier General in 1969. He became one of only three Army surgeons elected to membership in the American Surgical Association.

Known internationally as a consummate clinician and a brilliant and humane teacher, throughout his career he was continually serving as a bridge between disparate worlds. In recognition of Whelan's unique blend of qualities – high intellectual standards, humor, and a 'common touch,' the Army created a position for him: Chief of Medical Corps Affairs. He was in charge of all physicians in the Army and responsible for positioning them strategically worldwide. He traveled extensively in order to assess the needs and understand the physicians. In most hospitals he visited he also operated with the surgeons. His efforts resulted in an increase in pay for doctors and the development of new training opportunities and career paths.

In 1970 Dr. Whelan established the first 'Teaching Chiefs Conference,' a landmark in the history of the Army Medical Corps. This was the first occasion since the establishment of the Army residency program that teaching chiefs, directors of medical education, and military specialty consultants gathered to assess their general programs and to develop strategies for increasing retention rates.

Dr. Whelan was widely known for his expertise in war wounds and trauma surgery. Following the Second World War, he was engaged in a project to find methods to repair arteries damaged by various injuries, especially wartime munitions. These multiple fragment wounds produced by high-velocity weapons caused tremendously greater tissue destruction than civilian wounds. Injuries

to the popliteal artery behind the knee were common and resulted in mandatory above-the-knee amputations. Dr. Whelan developed techniques to repair these arteries. When the Korean War erupted, he was sent to the front in North Korea and involved in the creation of the first mobile army surgical hospital, or MASH unit. He applied these new techniques there which resulted in a salvage rate of about 80 percent. Given his specialization in trauma surgery, Whelan was one of the few doctors sent by Walter Reed Hospital on its mercy mission to Chile in 1960. He set up a field hospital just hours after the first earthquake shocks devastated part of that South American country.

One of Whelan's seminal works – "Management of War Wounds" – published in *Advances in Surgery*, prompted the Army Surgeon General to select Dr. Whelan as the editor-in-chief of a project to update the *Emergency War Surgery Handbook*. This new edition incorporated new surgical information learned during the Korean and Viet-

nam conflicts and included chapters on aeromedical evacuation, mass casualties in thermonuclear warfare, and reoperative abdominal surgery. In 1973 the revised U.S. Handbook was presented to a committee at NATO and within forty-eight hours unanimously accepted as the basis of the new edition for NATO Nations.

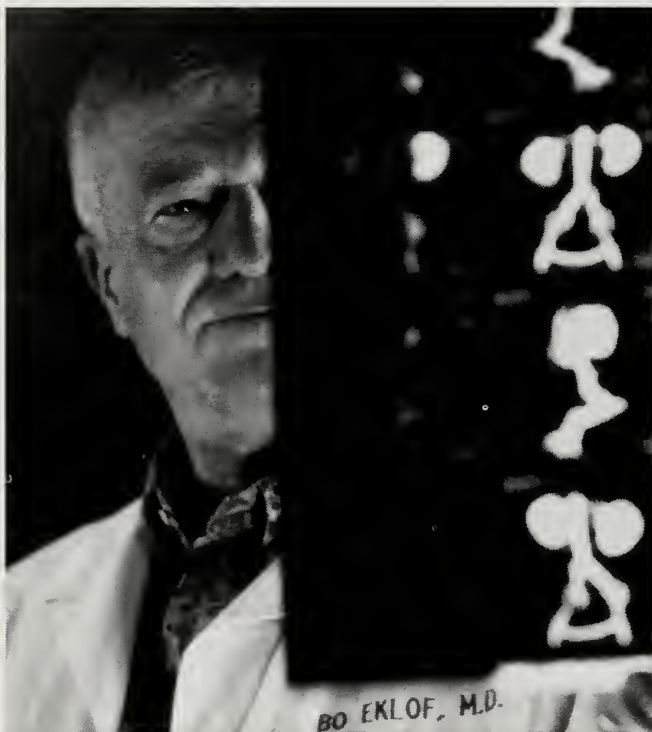
After his military retirement in 1973, Dr. Whelan became Chairman of Surgery at the University of Hawaii School of Medicine and dedicated himself to the training of young surgeons. One of his greatest contributions to medicine in Hawaii was undoubtedly his vision in drawing together the five main hospitals in Honolulu into an integrated medical system in lieu of a university hospital. He likewise championed the change in status of the University of Hawaii's medical training from a two-year program to a fully accredited four-year medical school. With a wide international network of contracts in both military and civilian medicine, Dr. Whelan also served as the director of internship and residency programs. Throughout his career he remained active in the American Surgical Association, American College of Surgeons, the Pan-Pacific Surgical Association, and the Pacific Coast Surgical Association of which he also served as president. He retired from his university appointment in 1990.

J. Judson McNamara MD and Christal Whelan



*Thomas J. Whelan Jr. MD
1921 – 1999*

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Early Stage Non-Small Cell Lung Cancer: New Approaches to Therapy

Joseph A. Treat, MD

November 1, 1999, 12:30 – 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants should be able to:

- Understand the rationale for the new strategies.
- Describe the current standard of care for early stage NSCLC.
- Gain knowledge of the new strategies for the management of NSCLC.
- Summarize the survival statistics and treatment outcomes of patients with NSCLC.

We would like to acknowledge the Educational Grant from Bristol-Myers Squibb Oncology

– Friday Noon Conference –

Temporal Arteritis & Polymyalgia Rheumatica

Larry Levin, MD

November 12, 1999, 12:30 – 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants should be able to:

- Describe the management of these disorders.
- Recognize common and uncommon manifestations of these illnesses.
- Understand the unusual presentations of temporal arthritis that can make diagnosis challenging.

– Ophthalmology Conference –

Glaucoma—Diagnosis, Pathophysiology, and Management Alternatives

Stefan Karas, MD

November 18, 1999, 4:30 – 5:30 p.m.

Straub Eye Department

Learning Objectives

At the conclusion, participants should be able to:

- Describe the type of glaucoma diagnosis, pathophysiology, differential diagnosis, and management alternatives.
- Interpret visual fields and implications of findings.
- Manage the disease process with understanding of the variety of therapeutic modalities.

– Friday Noon Conference –

Environment of Care Issues That Impact Physicians' Daily Practice

*Kevin Matsukado, Rose Arpon, Michelle Fisher,
Marilyn Spotts, & Clayton Takara*

November 19, 1999, 12:30 – 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants should be able to:

- Understand and identify Infection Control, Tuberculosis, and Bloodborne Pathogens.
- Learn how to prevent Back Injuries.
- Understand Radiation Safety.
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HMAA

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Letters to the Editor

Dear Dr. Goldstein:

I read and signed your petition today to retain funding for the UH Medical School. As we discussed I strongly support your efforts. You are to be honored for taking on this fight.

I think a very strong argument to maintain *and properly fund* the medical school is to pose a simple question: who would be the likely patient of a UH Medical School graduate? The answer is quick and easy—ourselves, our parents, and our children.

It's even more ridiculous the Dr. Mortimer would consider turning the medical school into some type of profit center tied to a two tiered tuition program for in state and out of state residents. What's next, a silent auction for admittance?

Additionally, just how will doctors in our state stay abreast of the most current changes in their field without a medical school within 2500 miles of them?

I'm a big sports fan and a businessman, but I'd rather ditch the athletic programs and the school of business before under funding the medical school.

In the interim, I'll keep saving so that my kids can attend college on the mainland.

Very truly yours,
Name Withheld by Request

An open letter to Dr. Russell Stodd, editor of the Weathervane Column.

Sir,
In the August 1999 issue of the Hawaii Medical Journal, you stated your opinion on gun control clearly and concisely on your Weathervane page. Lest anyone read your opinions and believe that even a small minority of physicians agree with you, I am compelled to respond.

Dr. Stodd, you seem to believe that the solution to the rash of recent shootings in America would be to eliminate parental apathy, eliminate one-parent families, improve school attendance and send our children to private schools where they have no shootings because teachers can communicate with parents." Sound idea, but...

I have a slightly easier and more practical solution.

1. All guns are to be registered.
2. All gun owners must be licensed to use the gun by passing a written test and a practical examination (e.g., prove they know where the safety is and how it works).
3. Children under 18 years of age can obtain a permit to use a gun, with a licensed adult present, after passing a written examination on gun safety.
4. Gun owners can and should be held liable if they were negligent in securing a safe location for their gun and if the gun was used in a crime or a firearm accident.

Yes, I know—"Second amendment, the right to bear arms!!!" Of

course you can have arms, just make sure they are registered and that you are certified to use them. And by the way, the Fathers of our Constitution wrote a good framework for the laws of our country, but there were many imperfections (remember the rights of white men to own black men?). Times change and so must we/you.

Speaking of times changing, Dr. Stodd, you must get over using '60's cliches when describing Rosie O'Donnell's gun control stands. She is neither "I.Q. challenged" nor a "bleeding heart" (are the NRA folks then "stone hearts"). Rather, she is a concerned citizen expressing the opinion of the vast majority of Americans, including almost all responsible medical societies.

The tragedy of the thousands of lives lost every year due to firearms must be controlled. Even you would not demand a double blind, crossover-controlled trial to accept the fact that there is a compelling relationship between the number of guns and the number of shootings.

I would like to make one last suggestion, Dr. Stodd. Put five dollars in your pocket, get into your car, drive to the nearest Starbucks, order a triple cafe mocha latte espresso cappuccino and WAKE UP!

George L. Druger, MD

Following is my reply to the open letter addressed to me by George L. Druger, M.D.

To the editor:

Interesting and thoughtful comments from Dr. Druger. Unlike his apparent position in speaking for the "vast majority of Americans, including almost all responsible medical societies," I speak only for myself. Perhaps he has misinterpreted my remarks in the August 1999, Hawaii Medical Journal. A less emotional reading will reveal that at no time do I defend or condemn firearms in this country.

I am not a lover of guns. As a Korean War Marine Corps rifleman, I qualified as a sharpshooter with all small arms from the Navy .45 semi-automatic pistol to the BAR, but I retain no affection for guns. I have no firearms in my home, own no guns and harbor no sympathy for the NRA. However, irrespective of my or Dr. Druger's attitude, guns are part of American culture, and that is not likely to change.

The addition of further "gun control" legislation is based on the assumption that somehow these teenage shooting episodes can be eliminated with more laws related to the use of guns. I wish it could be so. Laws made no difference when the determined boys broke the lock on a gun case for their shooting rampage. Also, it was obvious that they were well schooled in how to use the guns, so the problem goes much deeper than licenses, examinations, permits, safeties and locked cabinets. Possibly, even Dr Druger would agree. The Springfield, Oregon, and Columbine High School shootings, among other school teenage shooting events, stem from serious social problems. In every case, the parents had no idea what the children were doing or thinking, much less what might have generated their sick behavior.

The point of my paragraph in the August HMJ was to scold posturing politicians who seize upon a minuscule item like gun safeties as an attempted solution while ignoring the underlying societal ailment.

Russell T. Stodd, M.D. The Weathervane, HMJ

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Medical School Hotline

Student Profile: Class of 2003 At the John A. Burns School of Medicine (JABSOM)

**Satoru Izutsu, PhD, Associate Dean
Chair, Admissions Committee**

Thirty-five men and twenty-seven women entered the Class of 2003 on August 2, 1999. Fifty-three were selected from 1096 applications of which two hundred six qualified to be interviewed. Nine graduates from Imi-Ho'ola, the Post-Baccalaureate Program joined the class to make a total of 62. (The Imi-Ho'Ola Program addresses diversity and those who are educationally-socially, and economically disadvantaged.) They make up the 32nd entering class and the 11th class to be trained in the Problem Based Learning (PBL) curriculum format.

Fifty-five are Hawaii residents and 7 are nonresidents who come from American Samoa, Guam, California, Kansas, and Maryland. Twenty-one are reapplicants who have applied to John A. Burns School of Medicine (JABSOM) at least once prior.

The average age is 24.20. JABSOM is the most ethnically diverse school of medicine in the United States with 17 Japanese, 13 Caucasians, 7 Chinese, 7 Filipinos, 4 Hawaiians, 4 Other Asians, 3 Koreans, 2 Samoans, 1 American Indian, 1 Chamorro, 1 Mixed Asian, 1 Other Hispanic and 1 Vietnamese.

Thirty-five percent are graduates of public high schools and forty-two percent from private high schools in Hawaii. The remaining numbers come from high schools in the Pacific Islands and mainland.

Twenty-six are graduates from colleges in Hawaii (23 from University of Hawaii at Manoa, 1 Brigham Young University, 1 Chaminade, and 1 University of Hawaii at Hilo); thirty-five are from mainland colleges and one from a foreign college (International Christian University, Japan). The mainland colleges represented are: University of Washington-Seattle, Brown University, University of California-Berkeley, University of Southern California, University of Pennsylvania, Amherst College, Boston College, California State University-Fresno, Emory University, Hillside College, Mt. St. Mary's College, Oberlin College, Occidental College, Pennsylvania State University Main Campus, Santa Clara, Seattle University, Smith College, Stanford University, University of California-Irvine, University of California-San Diego, University of Colorado at Boulder, University of Kansas, University of Notre Dame, University of the Pacific, and Washington University.

Ninety-eight percent have their Bachelor degrees. Seven students have Masters degrees of whom one also has a doctorate and another with two Masters. The sixty-two students have majored in: Biology, Psychology, Zoology, Biochemistry, Human Nutrition, Anthropology/German, Anthropology, Anthropology/Public Health, Epidemiology, Asian Studies, Biological Basis of Behavior, Behavior, Biological Sciences, Biology/Economics, Biology/English, Biology/Foreign Language, Biology/History & Social Sciences, Biol-

ogy/History, Biology/Biochemistry, Biology/Biomedical Science, Biology/Chemistry, Biology/Public Health, Education, Business, Chemistry, Communications/Public Health, Health, Exercise Science/Biology, Human Biology/Epidemiology, Human Biology, Liberal Studies, Liberal Studies/Pre Med, Marketing, Physical Education, Physiology, Pre-Professional, and Premed/French/Bio-medical Sciences.


The twelve-member Admissions Committee that recommended the sixty-two for the class beginning in 1999 to the Interim Dean of the School of Medicine, Dr. Sherrel L. Hammar, was composed of clinical, basic science and other faculty. There were six men and six women who represented the major ethnic groups in Hawaii as well as age levels. The Committee met twenty-times between September 1998 and April 1999 to rate 206 applicants (10 from the Imi-Ho'ola Program). The rating of each candidate is conducted in a secret ballot format (1-10) after examining and discussing the following documents: Hawaii residency status, academic scores (Grade Point Averages and scores from the Medical College Admission Test-MCAT), two interviews, essays that address the questions, "Why medicine?" and "Why the John A. Burns School of Medicine?", at least two letters of recommendations, a biographical sketch, and transcripts via the American Medical College Admissions Service (AMCAS). Credits are awarded for clinical/health related and human services experience (i.e. employment, community services, extra-curricular activities) and related research/graduate studies. In addition, the Chair of the Admissions Committee who is the Associate Dean of the School of Medicine interviews all applicants. During the third week of April, the ratings were ranked and letters of acceptance sent to the top 53 candidates.

The entering class's MCAT scores in comparison with the national norms are competitive (the 1998 national norms are in parenthesis). JABSOM students scored: Verbal Reasoning 9.0 (7.8); Physical Sciences 9.47 (8.1); Writing Sample Q (O); Biological Sciences 9.90 (8.2)

Each first-year student is assigned a faculty advisor who maintains contact with the student throughout his/her academic years.

The sixty-two bright, motivated students have begun their journey into the next millennium. They have been carefully selected to succeed in their training and education to become successful physicians who will continue JABSOM's educational tradition as life-long learners to serve the communities that they will select to serve.

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SOURCE: American Heart Association, 1995



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Dr. Thomas Whelan, Jr. A True Gentleman and Scholar

Written and spoken by Bradley Wong MD, Saturday, September 18, 1999.

I was fortunate to have been one of Dr. Tom Whelan's residents in general surgery from 1975 to 1980. He was a great teacher, mentor, and friend. He was a brilliant man. His intellect and memory were superhuman. His administrative and organizational skills were extraordinary. His surgical skills and daring, unsurpassed. When you stood next to him, his charisma enveloped and embraced you, his mental hold on you was firm, inescapable.

Yet in addition to his intellectual prowess, he was an insightful person and had a wonderful talent for helping others. He cared about his residents. Though he bullied and inspired us into learning and doing good for patients, he had a huge heart and soul. He saw everyone through each of their individual trials and successes. He had a great humanness about him which endeared him to us all. I have met no other man with such a fantastic mix of attributes.

As a chief resident, I initiated the "Teacher of the Year Award." Our first winner, there could be no doubt, was Tom Whelan. We had to give him a "permanent" award so as to allow others a chance at achieving the honor. The entire medical community has benefited from this man's work. He has affected even those who have never met him or heard of him. Those he taught have taught others, but the impact of his achievements goes beyond this chain of disciples. He influenced the entire surgical community by the knowledge he shared and the moral standards he set.

I was honored to have been asked by his family to speak at his memorial. What follows are some of my words and the words of others who spoke that day.

"Tom Whelan was my teacher and good friend. He trained me. I love this man. In his later years, he became close to my dad, who's in the audience now. My dad gave me my genes, my nearsightedness, and my kidney stones. My second father, Tom Whelan, gave to me one of the greatest gifts, the joy of surgery.

There was good reason why we who served as residents with Tom Whelan called him the GENERAL. Though he was definitely a civilian when he became chairman of the department of surgery, I don't believe he ever read or ever got the letter from the army that officially retired him. Everyone around him, secretary, student, resident, faculty, family, knew exactly where one stood with him...BUCK PRIVATE.

There was no doubt in anyone's mind that he was born to lead: not

by force or coercion, but by the power of example. It was subtle yet unquestionable. So stealthy was he, he got us thinking we thought we had original thoughts. It was the Tom Sawyer phenomenon at its best: we whitewashed his fences and seemed to enjoy it.

It was a privilege and an honor to have served under Tom Whelan. He required your best effort. He of course invented the phrase "attention to detail." He meant it, his motto, our mantra.

Tom Whelan expected, demanded, your dedication, your devotion to your work, to your patients. For our own benefit he jerked our chains, chided our ignorance, spurred us to do better. It was to insure that we gave the best care to our patients. That was his ultimate goal: to turn us into real doctors, skilled yet caring, his own image.

We were, and still are, striving to meet his standards of excellence. He was the gold standard. He knew it. We knew it. But one of the beautiful aspects of this man, was while he knew we would never better him, he took great pride in each of our achievements and accomplishments.

He cared for each of us and treated each of our problems, great and small, with great compassion, understanding and fairness. He expected us to do well at all times, but knew that we could not be perfect at all times.

He was both fatherly and dictatorial, forgiving and relentless. No resident's problem was too insignificant nor overwhelming. He shepherded many of us through hard times. Patiently he advised, cajoled, threatened, encouraged, and entertained.

He set the standards for both the medical and surgical communities. He was inspirational and a master diplomat. The power of his intellect and his boyish charm won the cooperation of the surgical attending physicians, despite their notorious super egos. He fueled and charged the surgical residency program.

His vast knowledge trickled down through his students and peers and became amplified. Even now, we carry out his legacy in the community. Many a patient who has never heard of Tom Whelan is benefiting from his influence.

I believe that all of us who came under the influence of this great man are following his example of doing good for our fellow man. Tom Whelan would like that. He'd be proud. He would like it that his humor, generosity, and kindness have had great and beneficial effects on his friends. He would want that we would set an example



*Dr. Brad Wong and
Teacher-of-the-Year Whelan*

for others.

I loved his sense of humor, at times impish, always disarming. It took the sting out of his bite and defined the joy of his job and life and of the relationships of the people around him. Rarely did I ever see him without a smile or a laugh.

He was joking with me in the days before he died. I was turning the tables on him, testing his memory. He knew it. Really, he still had that leprechaun grin on his jowl. He's probably prancing around right now on this very stage singing McNamara's band. Off key,

most likely.

Tom Whelan, you were the doctors' doctor, the students' advocate, the patients' friend.

You were an extraordinary healer, teacher, leader, and friend to us all. You remain greatly admired now, as you were when in your prime. We are all grateful to have known you and to have felt the power and grace of your presence. We are better people for it.

You would appreciate how my young friends would address you now. "You da man, Tom Whelan, you da man."



Yale University days: class of 1943

Dr. Whelan

By Peter Barcia MD



Dr. Whelan at first MASH hospital, Korea 1951. Courtesy of Life Magazine.

I came to Tripler in 1965, interested in Ob-Gyn. In my 2nd month of a rotating internship while working alone on the Neurology Service, I evaluated a Samoan chief with headaches and erratic behavior; I concluded that he had an insulin producing tumor of the pancreas. Eventually, I presented this case to Dr. Whelan at the GI Conference. He invited me to observe the operation. The chief went back to Samoa cured of his problem, and I began a wonderful relationship with a man who was to become my teacher, mentor, father figure and our friend.

When COL. Whelan came to Tripler in 1965, he already had an international reputation as a vascular and trauma surgeon, he had served as a surgeon at the front in Korea when the Chinese entered the war and forced a retreat from the Chosun Reservoir in the middle of winter and a risky evacuation by sea from North Korea, he had cared for General of the Army, Douglas MacArthur, in his pro-

tracted last illness, and many other credits. I didn't know any of this; I only knew that he liked me, and that he wanted me to become a surgeon. I wasn't yet convinced, and started an Obstetric residency in Georgia. Six months later, I told Dr. Whelan that I wanted to be a surgeon, and I wanted to be in his program at Tripler. Unfortunately the Army bureaucracy decided to "teach me a lesson." Dr. Whelan came to the rescue. "Don't punish him or I'll resign!" He made an additional spot for me and I returned the next year to be his resident.

General Surgery residency, then as now, entails 100+hrs/wk in the hospital for 5 yrs. It was demanding, and Dr. Whelan was demanding, but it was also interesting and exciting, and I loved being a surgeon.

On Sunday mornings at 7AM, all the residents and staff gathered for Grand Rounds, during which we saw every patient on the service.

These rounds frequently went until 11 or 12 o'clock. At 8, rounds were suspended while Dr. Whelan went to the chapel for Mass; you didn't have to go to Mass...only it was 'better' if you did. Most did. After rounds, the residents frequently stayed until 3-4PM to finish up what was directed that morning.

The patient always came first; Dr. Whelan was always at the hospital, and you knew he expected the same of us. One Monday morning early in my residency, I met Dr. Whelan as I entered the ward. He noted my "new" sunburn; I became acutely embarrassed and stammered that 'my wife made me go to the beach!'

Another resident, Dick Dorazio, commenting on Dr. Whelan's work ethic: let's not do it now, let's do it tonight when everyone is tired! One night at 2AM, during an emergency operation, Dr. Whelan ordered a frozen section; I asked if I should call a pathologist. He responded, "If Dr. Barcia, and Dr. Dorazio, and Dr. Whelan can be here, EVERYBODY can be here!"

I accompanied Dr. Whelan when he was counseling the wife of a man critically ill. (I thought that he had no chance.) "Your husband is too sick...not to have an operation." I was incredulous, but silent. The patient went home after surgery.

In 1967, Dr. Whelan obtained \$1,000,000 to develop a surgical facility at Tripler. As a vascular surgeon, he was interested in a problem which had vexed surgeons since they started repairing injured blood vessels; why did arterial repairs clot when the vein was also injured? I was given this project to solve along with several of his suggestions. Three months and 20 pigs later, I had made some progress, and Dr. Whelan asked me about his suggestions. I replied somewhat off-handedly that I thought they were just suggestions, and had pursued a different route. He became quite serious, pointed his finger at me and said, "Peter, when I make a suggestion, I mean for you to do it!" Six months later, we solved the problem, published it in the *Annals of Surgery*, and today it is standard practice to repair the injured artery AND vein.

Upon graduation in 1971, he arranged for me to go to Vietnam as Chief of Surgery at the busiest hospital in the country. We communicated frequently, as he was very interested in my cases, experiences, and pictures. It was an unforgettable time. I lobbied with him to return to Tripler right away as staff, "Gen. Whelan, I don't need gray hair to teach Surgery!" This impetuous remark prompted him to say, "You aren't ready for the Medical Center yet; you need to grow up, learn to manage people, get some experience. I'm sending you to Ft. Jackson, SC: a Developmental Assignment!" Of course, he was right.

In 1969, he had been promoted to Brigadier General, an astounding event in that he had never "commanded", had never attended

War College or other service schools, or done the other prerequisites for this promotion. Instead he was merely a consummate clinician, a wonderful teacher and role model, and internationally known in Surgery. They created a special job for him: Medical Corp Affairs. He was in charge of all physicians in the Army. In this he was a huge success, he traveled extensively, met all his constituents, and listened. His efforts resulted in increased pay for physicians, better training opportunities, and better career choices. He gave doctors a powerful voice in the bureaucracy of Washington. In most hospitals he visited, he operated with the surgeons. At the time, he was easily the most respected and popular senior physician in the Army, and many expected him to be named the next Surgeon General. Unfortunately, political decisions were made and he was bypassed for promotion. The upside of this was he came to Hawaii, for a second career.

As Chairman of Surgery at the University of Hawaii, he maintained close ties with Tripler; he gave Oral Boards and attended the GI conference monthly for 15 years. All our residents rotated with him at Queens, and he sent his residents to Tripler. There in 1981, I operated upon Dr. Whelan for a tumor of the stomach. Several days postop I noted his hemoglobin was low. I prepared myself as I went in to see him. He was ready for me; after pleasantries, he asked me about his hemoglobin. I responded that it was low, and that we would give him iron and this would take care of it. He said, "How about some blood?" I told him that with his history of hepatitis and liver problems that I did not think that blood was a good idea. He said, "Peter, sit down and let's talk." After one-half hour, I ordered 2 units of blood.

He never forgot a name, a face or a promise. In 1972, he told Julie and I to keep our house in Hawaii; we'll bring you back when you are ready, and he did.

Dr. Whelan and Norma became our role models in life; they were a CLASS ACT. I remember when we were first invited to their large home at Ft. Kam. It was an elegant, sit down affair for the graduating chief residents; the Whelan daughters served the food, and later danced the hula and the Tahitian. The Whelans put everyone at ease. A splendid affair which was repeated yearly. They helped us decide to have a large family, to make the training of Army surgeons my career, and to live in Hawaii. I feel like I've lived a dream. I'd hitched my wagon to a star.

Three weeks ago as I was leaving Dr. Whelan's room in what was to become our last conversation, he remarked that we were both lucky and blessed to have the families we have.

We are all lucky and blessed to have known Tom Whelan.

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Genetics: The Future of Medicine

Genetic disease was once thought to be limited to a few rare conditions affecting children. It is now known to affect everyone. After years of promise, the field of genetics is finally bearing fruit and will increasingly affect the way medicine is practiced. In addition to environmental influences, every disease has genetic components that determine (1) the likelihood of a specific disease; (2) the age of onset; and (3) the severity.

It is our basic understanding of genetics, along with technological advances, that has allowed us to begin to fulfill our quest for better detection and treatment of disease. Indeed, we are increasing our ability to predict who will develop cancer, heart disease, diabetes and Alzheimer's disease, and help prevent these. Understanding how genetics works helps us to appreciate patterns of disease and how these patterns relate to our current medical dilemmas.

Every individual carries four to five potentially harmful genes related to our ethnic background and ancestral environment. We now have the ability to identify many of these genes. Our understanding of gene function and interaction with other genes and our environment has led us toward a clearer understanding of disease processes.

In each population, there is at least one major gene mutation which predisposes to disease. These mutations have become increasingly prevalent as carriers

survive and reproduce. As death rates from infectious disease has decreased, we have observed an increase in genetic disease.

Currently, cancer affects 35% to 50% of the population. Genetic risk assessment provides guidance for cost-effective medical management, decreasing the incidence of disease and death. Cardiovascular disease is beginning to yield to risk assessment and genetic testing, and predisposition to diabetes is on the horizon. Strategies to prevent neurodegenerative diseases for which genetic testing is already available are in the making. It is thought that mechanisms are similar for many of these disorders, raising hope that it will be possible to prevent common diseases such as Alzheimer's and Parkinson's.

Genetic services can reduce the rate of and death from diseases and conditions with a genetic component. This is accomplished by working with health care providers to assess genetic risk, diagnose and appropriately manage individuals and their families.

The Future of Medical Genetics

We know that many genes effect our health. For the first time, we are now able to see differences in genes on a molecular level. Although the amount of information is overwhelming, breakthroughs in technology have allowed us to handle large amounts of data. A new field of "informatics" will let us determine (1) whether a drug has adverse effects on a patient; (2) what therapies will likely be most successful for a patient with a specific disease; (3) high-risk diseases for that patient and; (4) low-risk diseases for that patient.

Genetic Services and Routine Patient Care

The effective delivery of genetic services requires integration with routine medicine, which will enhance

care. The Queen's Medical Center has long recognized the importance of integrating genetics services with medical practice. Clinical specialists have been brought together at the Queen's Comprehensive Genetics Center to provide genetics services in a much needed niche for the State of Hawaii and the Pacific Basin. The Queen's Comprehensive Genetics Center is available to help physicians identify patients who are at high-risk for a wide variety of disorders with genetic components. The Center can help to (1) identify patients who would benefit from genetic counseling and/or testing; (2) determine if clinical tests are available for a condition with a genetic component; (3) provide genetic testing for disorders that are common in Hawaii's population; (4) identify laboratories that can provide testing for other genetic disorders; and (5) interpret test results so that a physician and/or patient can make meaningful and helpful decisions about their health care.

The Queen's Genetics Center is a family-centered organization committed to the prevention, diagnosis, treatment and management of conditions with a genetic component. The foundation of our care is offered in the spirit of aloha as guided by the mission and ideals of our founders.

For more information about clinical genetics, please call the Queen's Comprehensive Genetics Center at 537-7633.

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HALIA ALOHA e Dr. Thomas Whelan

Noa Emmett Aluli MD

*Ha'alele koa wa'a, i koa kanaka
the koa canoe has departed leaving the warriors behind*

*E ho'opiha i ka makalua i hakahaka
fill the hole from which the plant has been removed*

*Aloha Kakahiaka, Aloha Mai, Aloha Kaua:
Aloha to this day
To those from this place - and they who have gone before us
And Aloha to you*

Greetings from Moloka'i, where I work as a primary care physician and am a Co-Medical Executive Director of the Moloka'i General Hospital, (a Queens Health System company), with Dr. Phillip Waiholo Reyes - who also sends his aloha and from Kaho'olawe, where I roam. Indeed this is an honor to be asked to share some thoughts and memories, in honor of a truly great man. Mahalo, Christal, for reconnecting me with your father, and family.

My first encounter with Thomas Whelan was in 1968-1969. I was teaching at Damien Memorial High School: mathematics! And I was the school's swimming coach. A number of my students and athletes were living at Fort Kamehameha—but I was most interested in checking out the surf at O'ahu military bases. It was there I met Dr. Whelan, and his family. "Small-kind" discussions. However he trusted me more as a chaperone for his daughter Sally and her friends.

In 1969, I entered the University of Hawai'i medical school and we were waiting and hopeful for notification that Dr. Whelan would join the faculty in order to begin the third and fourth year of medical training at the University.

My second encounter was in 1975 and 1976 when Dr. Whelan became the Professor/Chairman of the U of H School of Medicine, Department of Surgery and Director of the Internship / Residency programs. I became one of his first "interns" in the (FLEXIBLE) Integrated Transitional Residency program, a first-year Surgical / Family Practice Residency program.

In January, 1976, I "occupied" Kaho'olawe, (knowing that Dr. Whelan was a trauma surgeon!) and continued to do so on my 48 hours of rest between the 72-hour call schedule at QMC Emergency Room. Unlike other faculty and administrators, Dr. Whelan took the initiative to support me, because what I did while off duty was my own time, even though QMC became the "staging" ground for the Protect Kaho'olawe 'Ohana' occupations. If convicted with a felony, I would not be able to practice medicine anywhere. I know today, that Dr. Whelan believed in me, but probably was confused with my motives and risks of being charged with "conspiring" against the US Government.

As Dr. Whelan and I talked about my confrontation with the Navy, I acquired the guts and bravery to sit across the tables from military brass such as Generals and Admirals, because I was able to do so with him. Dr. Whelan had set me up with clarity and determination

to discuss my *na'au* (gut feeling) for what was most important to me: the holistic improvement of the health conditions of us Hawaiians.

So to Dr. Whelan, we called you Doctor General, you're a major part of the credit for: my career as a physician, my Hawaiian activism, the ending of the bombing of Kaho'olawe, and now the restoration and remediation and of the island.

Many times, when seeing patients pre and post operative on Moloka'i, or while walking upon Kaho'olawe, or swimming in her waters, I have acknowledged Dr. Whelan, as I do the many *kupuna* (elders) who have stood behind me and my work, and upon whose shoulders we stand today. You have lifted us up, especially when issues have complicated our work.

As Hawai'i had their ali'i—Kamehameha, Lunalilo, Emma, Kapi'olani, Liliuokalani and Pauahi, whose legacies continue to improve upon the health and wellness of their people—so too JABSOM has her patriarchs—Dean Winsdor Cutting, Dr. Charlie Judd, Dr. Fred Gilbert.

Dr. Thomas Whelan joins them, men of a distinctive quality, men who have laid a solid foundation for our medical school and resident training programs for Hawai'i and the Pacific.

I recall an article in 1990, at Dr. Whelan's retirement celebration dinner, of a congratulatory note from President George Bush which I quote: "Your legacy will be the hundreds of physicians who, because of your tutelage and inspiration, will continue to save lives and ease suffering." I will never know if Dr. Whelan played any role, as did Representative Pat Saiki, in ending the bombing of Kaho'olawe. Mahalo Dr. General anyway. And mahalo today, to the Dr. General, as now there are: more than 1500 JABSOM graduates, more than 190 *kanaka maoli* physicians, and more than 60 percent of the physicians practicing in Hawai'i are either JABSOM graduates, or physicians trained in the UH Integrated Residency Programs.

So to you Dr. Whelan, your lasting legacy is a mahalo for allowing people, like us, to compete and collaborate in the advancement of medicine. Our work is to organize the graduates and faculty to position ourselves for the next century of quality health care and wellness in Hawai'i Nei.

*Ha'alele koa wa'a, i koa kanaka
as you have departed, who will you have left the koa canoe to,
having departed leaving the warriors behind*

*E ho'opiha i ka makalua i hakahaka
and who will fill the hole from which you have been removed*

We will!

*Naha ke kanaka, ka hale o ke aloha
we are broken as men, and your house of love is grieved by
your beloved passing*

Halia Aloha - fond memories, Dr. Whelan



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Thomas Joseph Whelan, Jr. MD

A Remembrance

By Sharon Whelan Weiss MD
September 18, 1999

When I was eight years old, my favorite television series was about a Scandinavian immigrant family making their way in America. Their lives were a series of challenges made all the more difficult by their lack of financial resources. But they were told by their parents that there was a cache of money hidden in the house that they could tap if needed. Each week I marveled at how they drew on each other's strength and ingenuity and never used the hidden money. Only later did I realize there had never been any hidden money, but their wealth had been each other. So it was with our family. It was our strong sense of family, largely derived from my father which became the fabric on which life's early lessons and values were embroidered: love, loyalty, honesty, and fair play. He insisted on obedience to him and respect toward my Mother, who was never referred to as "She" but always as "Mother." His rules were tough and by today's standards even prudish—no lipstick until one's 16th birthday, and no red nailpolish—never. Bad language was unthinkable. When we complained as adults that he had been too strict a parent, he enjoyed telling us that was why we had turned out so well. Above all, Dad taught us to laugh. We laughed at life's incongruities. We laughed at ourselves. We even laughed at Dad. Returning home after an all night ordeal with a very sick patient, he thrilled us with the story of how he resuscitated his patient by banging on his chest until one of us interrupted, "What's so special about that, that's how you fix everything around the house."

My father placed a high value on education. His parents had worked hard to send him to Andover and Yale University. He repaid them with his exceptional performances both in the classroom and the playing field. In turn he encouraged each of us to realize our full potential. He always insisted that gender was no barrier to achievement. As a young girl I grew up believing that I could do anything I wanted to but he did caution me that I could not have both the rights of men and the privileges of women. I must decide which. What a wonderful first mentor! He displayed largesse toward me at the time of college applications. I had a deal with my father that I would attend the college which gave me the largest scholarship. On acceptance day I received an acceptance letter from my first choice college, Wellesley, but without the badly needed scholarship. A second acceptance letter arrived from the University of Chicago with a generous stipend. With a heavy heart I showed Dad the letters. To my great surprise he gathered me into his arms and said, "Any daughter of mine who gets into Wellesley will go to Wellesley College." And so I did.

Although well-educated in traditional ways, Dad possessed an even more amazing wisdom about people. With his extroverted personality he knew instinctively how to bring out the best in people. His approach to solving a problem was to try to understand and

empathize with the person. Administrators have a fancy word for this now, "non positional negotiation." Dad thought it simply the decent thing to do—it was, to use the Yiddish expression, being a "Mensch." He could predict outcomes by simply understanding the nature of the people involved. After caring for General Douglas MacArthur during his terminal illness he delivered a brilliant analysis at a medical meeting of how this great man's personality and idiosyncrasies had figured so prominently in his illness. Long after I left home Dad continued to be my best resource for advice on any number of professional issues that might arise, although his advice was often couched in athletic terms. Complaining to Dad that there were colleagues who didn't seem to know what was going on he would say, "There's always someone in left field." Encouragement might come in the form of "Hit that ball!" If you abdicated responsibility or quit too soon, he would say, "So, it's coach take me out, is it?" Hassles with administrators would lead to one of his all-time favorite phrases, "Don't mess with the Indians, go to the Chief." He was pleasantly surprised one day when I gave him some advice and told him to do the "full court press." Thinking that somewhere along the way his eldest daughter had finally learned something about sports, he was flabbergasted to find out that my understanding of the term had something to do with having one's clothes well pressed when one made official appearances. My father had so many friends and grateful patients. Under the Christmas tree each year would be a bounty of gifts—homemade kim chee from a Korean patient, an embroidered sampler from a young girl, and bottles of scotch and bourbon from appreciative anesthesiologists.

Despite all of my father's accomplishments personally and professionally, he was fundamentally a modest person. It was said that he received a nearly unanimous vote to be Captain of the Yale baseball team of 1943. The only dissenting vote was his own. He was not afraid to admit error. At the wedding of my younger sister, Rosemary, he asked my forgiveness for his initial reluctance to accept my decision to marry my husband. With tears in his eyes he said "With Rosemary's wedding, God has given me a second chance, I don't deserve this chance, but God has given it to me anyway." With such words I knew I was in the presence of a great man.

My father was a happy man endowed with great *joie de vivre*. He loved parties and social events of all kinds. He was famous for his rendition of the song, "McNamara's Band," a command performance at the end of many parties. He would truly regard today's event as a celebration of his life. He would have so many wonderful things to say to all of you. He would thank Tom Kane and Ted Harada for their tireless efforts over the last few months on his behalf. He would be so proud that Emmett Aluli, a member of

Hawaii's first graduating medical school class, and Brad Wong, one of his former residents, would speak to you. Both symbolize his dream of a four-year medical school in Hawaii. He would remember with Peter Barcia the importance of training military and his impact on young military doctors. He would be pleased that Tom Rienzi, his friend and walkmate, would assist in celebrating this Mass for him. He would be touched that his brothers and sisters, Mildred, Maryjane, and Bill had traveled so far to be part of this tribute. He would be sad, of course, that Charlie Judd, his Yale classmate and lifelong friend, and his beloved brother Bob could not be here. He would tell you how much each of his children meant to him—each a special person with unique talents. He admitted T.J.'s generosity

and selflessness, Rosemary's warmth and compassion, Sally's keen intellect and spirit, Christal's dedication to scholarship, and Michael's ebullience and humor. As for me, I was his "Beansie Anne," a nickname dating back to his struggling medical student years when we must have consumed a lot of beans. As the eldest child, I was the responsible one, the one who would catch hell (I mean heck) if something went wrong, but also receive abundant praise for success. Of my mother, his high school sweetheart, he would say little, for his smiling Irish eyes would proclaim his love. But above all my father would want you to know, the lesson I learned long ago. There is no hidden wealth in this world, the wealth is here amongst each other.



The Whelan Family

(Standing from left: Michael Whelan, Christal Whelan, Norma Whelan, Thomas J. Whelan, Jr., Thomas J. Whelan III. Kneeling from left: Rosemary Polen, Sharon Weiss, Sally Whelan.)

*Sharon Weiss, M.D., the eldest child, is a pathologist and co-author of the book *Soft Tissue Tumors*. She received her medical and residency training at the Johns Hopkins Hospital and has held positions as Chairman, Department of Soft Tissue Pathology of the Armed Forces Institute of Pathology, and the first A. James French Professor of Diagnostic Pathology at the University of Michigan. She is currently Professor and Vice Chair of Pathology at Emory University.*

Thomas J. Whelan III, first-born son, is an English teacher at Farrington High School in Honolulu, Hawaii. This year he completed a ten-year project – a family history of the Whelans – that led him to places as far flung as the National Archives in Washington, D.C., and local parishes in Ireland.

Rosemary Polen, R.N., works in the field of health and wellness in Baltimore, Maryland where she specializes in cardiac rehabilitation, senior fitness, and weight reduction. She also coordinates and acts in independent theatrical productions.

*Sally Whelan is the special projects coordinator at the Boston Women's Health Book Collective, a women's health, education, and advocacy organization renowned for the bestseller *Our Bodies, Ourselves*. She facilitates the translations and adaptations of the book by women's organizations around the world, most recently in China and Thailand.*

*Christal Whelan, author and visual anthropologist, resides mostly in Japan. Her book – *The Beginning of Heaven and Earth: The Sacred Book of Japan's Hidden Christians* – has received international recognition along with her documentary – *Otaiya* – scheduled for screening at this year's Margaret Mead Film and Video Festival at the American Museum of Natural History. She is currently working on a film about the tango in three cultures: Japan, Finland, and Argentina.*

Michael Whelan, graduate of the Culinary Institute of America (CIA), and former chef at the Halekulani Hotel's La Mer restaurant, currently teaches culinary arts at Scottsdale Community College in Scottsdale, Arizona.

Eulogy for Thomas J. Whelan

by daughter, Sally Whelan



Dr. Whelan when president of the Pacific Coast Surgical Association and Mrs. Whelan.

My father was born and grew up in Lynn, Massachusetts as part of a large Irish Catholic family. It was and still is, a very strong and close family. He would be so happy to know that four members of that family made the journey from Boston to be with us, and with him today.

He was the only one of his brothers and sisters who chose to live a life far away from the circle of love that family made. But over the years I came to see how much he held that family within, as a guide to all that he did. I see that everything my father became, all the accomplishments we have heard about in the remembrances today, spring straight from the qualities and values instilled in that family by my father's mother and father.

My father knew that much was expected of him. He knew that three family generations, since emigration from Ireland, had worked hard to find a place in America and thrive. He knew he was blessed

to be in a family that valued education, and that he should strive to excel academically, and achieve excellence in his work. But I think he also knew that, more than anything else, his parents expected him to be a good person – to move about the world, in any endeavor and in daily behavior, with integrity. He was very consistent in holding to his values. And those values were, in large part, about people—how you treat people, enjoying time with people, and respecting all kinds of people.

My father relished his work, and his beliefs permeated his practice of medicine. He believed that healthcare was a birthright, and that a lack of health insurance should never exclude anyone from the best of care. He loved seeing women enter medicine, and gave endless support and encouragement to his women medical students and residents. He had a vision of training physicians to serve in their own communities throughout the Pacific, especially in underserved

areas. Occasionally, we would meet his students and residents with whom he spent much time, and we would joke with them that they got the better part of his day. Maybe we should sign up if we wanted more time with him. Perhaps most importantly in his teaching he insisted that a physician be warm and compassionate with those who came into his or her care. As recently as a few weeks ago my father told me how wonderful his work had been – what could be better, he said, than being able to help people everyday in such a meaningful way. Untold numbers of those who came into his care were grateful for his medical talents and, equally, for his deep humanity.

My dad loved humor, but he was also a serious man. You could play, but life was not to play around with. A life was to be all you can be. Work was not an endeavor for bringing in wealth, or even primarily about success and acclaim. Work was doing what you love, giving it your best, and the rest would follow. Being a parent was not about going along with what all the other parents were doing or allowing, but holding fast to your values and imparting them to your children. Sometimes he met resistance, during our teen years, in certain of our life decisions that he did not understand or approve of, or in differences in values. What strikes me now about those times is that after the initial differences he had the bigness of character to be open. He once told a friend of mine that his children were his teachers. He said we forced him to stretch, we made him embrace things he never imagined he would and, in this way, we widened his world view. This was nice to hear, but I give him most of the credit. Because he, more than anyone I know, learned from his mistakes, took them to heart, and really did try harder the next time. Would that we could all say that about ourselves.

Over the years he stretched and mellowed. He retired, and remained very active tutoring, consulting, and lecturing. And then over three years ago he had a stroke that took way too much from him. Fast-moving conversations became confusing; he still was gregarious, but social gatherings could be hard; and activities he loved were no longer possible. The days could be long. Somehow, though, his sunny nature endured, as well as his ability to always

enjoy something. Short-term memory was hard for him, but throw him a story about the old days – about a championship ball team he played on in high school, or a play he made as first baseman at Yale – and his mind was at once bright and happy, recalling vivid details of an exciting game.

Memories sustained him; he would dip into them and come up smiling. Sometimes, after sitting poolside, he would come into the house and say to my mother, “We have such a great family. It really has been a very good life.” What a blessing to be able to sum it up that way. It was a very full life. He was a baseball player, an army general, a physician, a teacher, a husband of 55 years, and a father of six children. And yet with all this he was strikingly unpretentious. He was many things to many people. Some, but by no means all, of the people he touched are here today.

And now he is gone.

He never seemed afraid to die. He was humble about death, but thought it as natural as breathing. At the burial of my grandfather, Papa Gianascol, I sobbed as they lowered the casket. My father walked over to me, put his arm around me and said very tenderly, “Darling...all you can do is let go.”

Now, we are trying to let go of you, Dad. And...we are holding you with us forever.

We are gathered here to honor and remember you. You would love this gathering of the people you loved.

We are with you wherever you are, and we are going to miss you terribly.

We are very lucky to have had you in our lives. God bless you, Dad.



Dr. Whelan becomes a brigadier general: pinning the stars

Dr. Thomas J. Whelan... the finest surgeon

COL (ret.) Yeu-Tsu Margaret Lee MD

I came to work as a general surgeon at the Tripler Army Medical Center in August of 1983. I did not know Dr. Whelan at first, but I saw his picture on the wall outside the Department of Surgery's office. Under his pictures, it said: "Brigadier General, Chief of Surgery, July 1969 – June 1971." I was very impressed, because other Chiefs of Surgery were all Colonels.

I was more impressed when I attended his teaching conferences. He used to come to Tripler at least twice a week for GI conference and for the resident seminar. When he was in the room, all the residents and staffs were at attention. He asked questions in such a way, that we did not feel threatened. Not only could he explain complex issues in simple terms, but his analysis of alternative diagnoses made perplexing cases seemed obvious. He had vast surgical experiences and he published many papers relating to arterial and venous diseases.¹⁻⁶ In addition, all military surgeons should read his reports about lessons learned in the Viet Nam war and Korean conflict.⁷⁻¹¹

On a personal note, I found Dr. Whelan was a true educator...he encouraged women to go to medical schools and he did not discourage women who wanted to be surgeons. Unlike some surgeons who appeared to be egotistic, Dr. Whelan was always a gentleman. Despite his busy schedule, he and Mrs. Whelan came to one of my dance parties. Later, they also took ballroom dance lessons themselves.

Besides his contributions to surgery and medical education, Dr. Whelan has enriched the lives of many, many people. At the annual residents graduation parties, he usually led the crowd in singing "McNamara's Band." We'll miss him, because as the song said: "he is the leader of the band. Although we're few in number, he is the finest in the land."

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J.J. McNamara MD & Tom Whelan MD (June 1984), leading "McNamara's Band"



From the left: Dr. Whelan, Major General James Peek, Harriet (Dr. Whelan's Secretary), Dr. Yeutsu M. Lee.

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LIFE IN THESE PARTS...

Ninety-two year old sex offender Aloph Erickson applied for a pardon and was denied on grounds that he was still dangerous...(*KHVH News Item Jul 14*)

CONGRESS SHOULDN'T ACT ON DOCTORSUICIDE LAW *The Honolulu Advertiser Editorial Sat Oct 23 1999*

Given the profound emotional and moral issues surrounding the question of physician-assisted suicide, it is tragic that Congress is rushing to criminalize the process.

The House is prepared to vote – as early as Tuesday – on a bill that would effectively gut Oregon's pioneering physician-assisted suicide law. It would invoke federal penalties, including license revocation, against doctors who use controlled substances to cause or hasten the death of their patients.

While this would be a neat federal end run around the Oregon law, it is the wrong way to approach this most difficult issue.

If nothing else, the law would make physicians even more leery than they already are about using painkilling drugs to keep their patients comfortable.

Physician-assisted suicide, or perhaps physician-assisted death, is but a point on a continuum of issues surrounding death with dignity.

Hawaii has taken the proper course in dealing with these issues by appointing a thoughtful committee that has tried to look at the entire issue in context. The report of the Hawaii committee is before the Legislature for consideration.

The bill pending before Congress would short-circuit that effort. It should not become law.

PROCTALGIA *By Dr. John Cocker (Editor of Stitches)*

Excerpts from LOONEY TOONS (In praise of eccentricity)

Eccentrics can be irritating, but they can also liven up a dull day. When I was in the Air Force, the station where I was based got a call from a lady who wanted to complain about aircraft killing birds. For some reason the switchboard routed this to the medical section, where I was preparing to start a day's work.

The caller spoke well, but at about 300 words a minute. She'd read in Time magazine that military aircraft were killing birds by ingesting them into jet engines, and so all these low-flying aircraft had to be stopped.

I waited for a pause, which finally came, and interjected, "Just a minute, you're talking to the wrong person. This has nothing to do with me."

Another person who kept me irritated or entertained over many years, was a patient who always came in with his elderly wife...At the end of one visit, he said this was a special day for him. Years ago he'd invented a gadget which when added to

the carburetor would cut fuel consumption by 95%. General Motors had finally bought it from him and they were going downtown that day to pick up the cheque for \$27 million.

Very recently a colleague told me that on a taxi ride, the driver had told him he was a retired superior court judge who'd got bored in retirement and so was driving a cab for something to do.

In the good old days, the village eccentrics were well known, and interesting members of the community. Now we say they suffer from bipolar mood disorders, put them on lithium, and make the world a duller place...

MEDICAL TIDBITS I

Relanza FDA had approved Relanza, an inhaled anti-influenza drug that cuts symptoms by one or two days. Relanza works against both Type A and Type B strains, but patients must start the drug early and continue twice daily for five days...

Food Tips for Tots: Families following the latest nutritional guides for tots (i.e. reduced fat, high fiber diets) don't provide enough vitamins, minerals and other nutrients necessary for growing bodies...Susan Roberts (a nutrition researcher at Tufts University) and Dr. Melvin Hyman, pediatric gastroenterologist at UCSF have authored "Feeding Your Child for Lifelong Health" and point out that the kids are not getting enough iron, zinc and calcium...

Resistance Redux: A huge study in Canada concluded that 5% of *S. Pneumoniae* (responsible for pneumonia and meningitis) may be resistance to fluoroquinolones. Fluoroquinolones being synthetic, it has been hoped that bacterial resistance would be less...

Deprived Hearts: Researchers report that half of elderly heart attack patients (65 and older) receive neither angioplasty or clot dissolving drugs within six hours of arrival at a hospital...Hence they are twice as likely to die as those treated quickly...

Blastocyst Transfer: New technique in in-vitro fertilization...When the embryo is transferred from lab dish to the mother's womb on the 4th day instead of the 3rd, the success rate increased...

Time Aug 9

POTPOURI...

Which End Is Up?

Last winter, one of my colleagues worked an extra-long shift in the ER. It was mid-Feb and the cold and flu season had hit hard. Sore throat after

sore throat churned through the ER with rhythmic regularity. He managed only a few winks of sleep on his 24 hour stint and by the end his neural synapses were functioning sluggishly...

The following day, a young patient complained of sniffles and sore throat, but she was due for her routine pap test and had positioned herself in the stirrups...While inserting the vaginal speculum, my colleague very loudly and definitely blurted out, "Now say AAH?" Wonder who had the redder face, my colleague or the poor bewildered patient...

Stephen MacLean, MD

The Eager Fiance...

A very polite, 82 yr old male visited my office for the first time and asked me for a prescription for Viagra. I told him that it wasn't available in Canada yet and that I wasn't sure it was safe for him. He insisted on telling me his story: "I've met a woman and we're planning to get married, but before we get married I would like to consume her."

*Jerzy Pawlak, MD
(Stitches Nov '98)*

Old Age?

Mrs. J, an elderly patient came to see me. After introductions and taking her history, it was apparent her major complaint was a painful shoulder, which had been bothering her for several years and was severe enough to limit her daily activities. I asked if her previous doctor had told her what the problem was.

"He told me the X-rays showed it was just old age," she replied.

"What was your response to that statement?" I asked

I told him, "That's odd, my other shoulder doesn't hurt and it's exactly the same age."

Leonard Aldridge, MD

Nighttime Emergency

A blustery night in December. At 2:30 in the morning, a woman reported over the phone that her two-year-old girl had a cough and a fever.

"That might be pneumonia," I thought, and set out on a trip to the other end of the city.

On examination, her chest was clear, but she had the typical rash of measles...

"She has the measles," I told the mother.

"Oh, I know she has the measles, but I was worried she might have pinworms."

Katherine Richter, MD

Poor Penmanship

One of my lab colleagues, a kindly gray-haired, very Christian lady in her mid-50's, was working at the phlebotomy station of a large hospital when a nervous looking young man came in. Avoiding her gaze, he handed her a requisition. She struggled over two cryptic words scrawled on the paper, finally decoding them to read "serum amylase." After leading the patient to a chair, she

sat him down and asked him to remove his coat.
"Right here, in the middle of the room?" he asked in a quavering voice.
"Yes," she replied, "I just need to take a specimen from you."

His eyes widened as she turned away to organize her test tubes.

"You're going to take my specimen?" he asked anxiously?"

A bit miffed, she replied, "Of, course. Don't worry, I'm very experienced at this."

Tourniquet, Vacutainer and 21-gauze needle in hand, she wheeled around to face the pallid and trembling patient.

"Oh, frightened of needles, are we? Really," she said trying to comfort him, "it's just a little prick; there's nothing to worry about."

At this point, the young man gave a hoarse cry, seized his coat and ran down the corridor and out the exit, never to return. The technologist could only stare in mute astonishment.

It was only when the young man's doctor called a few days later looking for his test results that the staff realized that "s...a..." had actually been intended to read "semen analysis."

*Dr. Avis Piton
Stitches Nov '96*

MEDICAL TIDBITS II

SAMe

Pronounced (SAM-me) and supposed to combat depression, ease aching joints and possibly revitalize the liver...SAMe was introduced in the US in March and is already the 4th most popular supplement in drug store chains and general retail outlets. SAMe is surpassing St. John's wort in sales...SAMe is short for S-adenosyl methionine (a compound found in every body cell) which is found in every cell of the body and plays a pivotal role in hundreds of biochemical reactions in the body as a methyl donor...Methylation reactions are important in the production of the brain's neurotransmitters and enzymes that help repair joints and the liver.

Italian researchers have documented its antidepressant qualities. German researchers feel it helps repair osteoarthritic joints...SAMe is still a prescription drug in Europe. Minor side effects include hot, itchy ears...

Genes of the Heart: Researchers have shown that direct injection of the heart with blood vessel promoting genes is safe and well tolerated and that the patients report less chest pain...

Ritalin: Boys on Ritalin for ADHD (attention deficit hyperactivity disorder) are less likely to abuse alcohol and other substances in adulthood...

(Time Aug 16)

Fatigue: One survey found that 25% of patients in a doctor's office had significant fatigue, but only half actually told their physicians. The American College of Physicians—Ameri-

can Society of Internal Medicine is launching an educational campaign that will highlight three of the most common medical causes viz thyroid disorders; depression; and sleep apnea...

(Time Aug 23)

THE FEDERAL GOVERNMENTS
NEW, UNABRIDGED MEDICAL
DICTIONARY

Barium: What you do when the patients dies
Urine: The opposite of "You're out!"
Cauterize: Made eye contact with her
Ova: Finished; done with
Dilate: To live a long time
Enema: Opposite of a friend
Node: Was aware of
White count: The number of Caucasians
Hernia: Pertaining to a female's knee
Fibrillate: To tell a small lie
D&C: Where Washington is
Bunion: Paul's surname
Rectum: Dang near killed him
Paradox: Two doctors
Coronary: Domesticated Yellow Bird
Constipation: Endangered feces
Penis: Someone who plays the piano
Humerus: To tell us what we want to hear
Intestine: Currently taking an exam
Outpatient: A person who has fainted
Genital: Non-Jew
Sacrum: Holy
Pap Smear: To slander your father
Pelvis: The evil twin of Elvis
Seizure: Roman Emperor
Cat Scan: When the Secret Service looks for Socks

POTPOURRI...

When I was an intern rotating through urology, I asked a Scottish lady: "Does your urine burn?"

She replied, "I don't know, Doctor, I've never tried to light it."

*Dennis Gardner, MD
Nepean, Ont.*

A disgruntled 15-year-old came into the Emergency Room, having cut her finger on the meat slicer at her part-time job at a delicatessen... In order to take the young woman's mind off her plight as I was sewing the wound, I asked her, "So what were you making when you cut your finger?"

"About \$5.25 an hour," came the serious reply.

*Chris Carter, MD
Toronto*

MEDICAL TIDBITS III

Protein Power: Data on 120,000 nurses suggests that protein from poultry and dairy foods (but no red meat) reduces the risk of dying from diagnosed breast cancer...Cutting down on fat doesn't seem to make any difference...

Djà vu Drug: A major study shows that the 30-year-old drug Aldactone used with ACE Inhibitors

reduced death rate from severe congestive heart failure by a third (possibly saving tens of thousands of lives a year)

Less Is More: Up to one tablet of ASA/d protects against thrombolytic strokes, but 2 tablets/d doubles the risk of hemorrhagic strokes...

Reports on AIDS: The HIV Prevention Conference met in Atlanta...The number of AIDS deaths has dropped 60% (Less than 20,000/yr) but the decline is slowing...However, the incidence of AIDS among Afro Americans has risen from 50% of all children in 1984 to 70% in 1988...New AIDS cases: Afro Americans: 48%; Whites: 31%; Hispanics: 20%; Others: 1%

Boning Up: Reloxifene reduces the risk of spinal fractures by 50% in women with osteoporosis. Another benefit recently discovered is that the drug also reduces the risk of breast cancer by 70%...

Hypothyroid During Pregnancy: A recent report shows that women who are hypothyroid during pregnancy are likely to have children who score 20 points below average on standard intelligence tests...

From Our Readers

The language nerds were testing another computer translation experiment, English-to-Russian. The test phrase was, "The spirit is willing, but the flesh is weak."

The translation returned as: "The ghost is ready, but the meat is raw."

*Rex D. Couch, MD
4359 Providence Point Place,
Issaquah, WA 98029*

P.S. "Best wishes from retirement and Washington—Miss you all and great friends and colleagues on Kauai."

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FOOD FOR THOUGHT...

"There is no wealth, but life."

John Ruskin

"Try not to become a man of success, but rather try to become a man of value."

Albert Einstein

"The highest reward for man's toil is not what he gets for it, but what he becomes by it."

John Ruskin

"There is nothing more frightening than ignorance in action."

Johann Von Goethe

MEDICAL TIDBITS IV

Testicular Malignancies: Testicular cancer got a lot of press when survivor Lance Armstrong won the Tour de France bicycle race, but it is a relatively rare malignancy representing 1% of new male cancers (prostate Ca is 30 times more common). Typically, it is diagnosed between ages 30 to 35 with a 2nd smaller peak over 65. The only proven risk factor is cryptorchism, which occurs, in 3% of the male population. Other risk factors are family hx, HIV infections... The good news is that testicular cancer has a 5-year survival rate of 95% and 100% for cases detected early...

Catch Your Breath: A major study of 72,000 middle-aged women finds that walking briskly for 30 minutes/d cuts the risk of heart attack up to 40%.

GP Redux: In California, a survey of medical schools (1993-98) found that graduates entering primary care residencies rose from 45% to 54%.

Preemptive Strike: A new analysis concludes that prophylactic radiation of the skull in lung cancer bestows a small but significant survival advantage...

Unlucky Strokes: The risk of stroke during and after heart surgery is tripled in women and diabetics and 14 fold greater in patients with a prior history of stroke...

(Time Sep 6)

The Great Grape: Everyone knows that red wine keeps the heart healthy. It is now known that 12 oz of purple grape juice (not the white kind) per day can offset the damaging effects of LDL. Fruit juice has the same beneficial flavanoids as red wine.

Heads Up: Concussions from sports are far more prevalent than once thought. About 63,000 concussions occur among high school students mostly during football games. Dutch researchers report that 50% of all soccer players suffer concussions. A U.S. study of college football players found that two or more concussions can impair intellectual performance... Signs of concussion include blackouts, dizziness and confusion...

RAW DATA (from Playboy Oct '99)

Whine & Pine:

Organization that spent the most money on political lobbying in 1997: American Medical Association (\$17.28 million); runner-up: Phillip Morris (\$15.8 million)

Batter Up:

Highest salary in baseball for the 1988 season: \$2.6 million. For the 1998 season: \$13 million.

Wages:

Adjusted to 1997 dollar, the minimum wage in 1961: \$6.17 per hour. In 1997: \$5.15 per hour. Based on a 40-hour work week, the salary of Walt Disney's chairman Michael Eisner: \$287,000

per hour. Salary of the US president: \$200,000 a year. Number of years it has remained the same: 30.

MEDICAL TIDBITS V

Hear Ye: It seems that tonsillectomy and adenoidectomies done for recurring ear infections results in a slight reduction only for the first year after the procedure...

Spare the Scalpel: A study shows that examining a kid's belly ache with ultrasound or CAT scan is 94% accurate in diagnosing acute appendicitis...

(Time Sep 27)

Chronic Pain: A poll taken by the American Pain Society reveals that 91% of chronic pain sufferers have tried at least an over the counter medicine; 60% have been prescribed NSAIDs and 42% have tried narcotics or opioids.

A recent article in the Southern Medical Journal discussed anecdotal evidence that antiseizure drugs provide the best relief for neuropathic pain.

The newest and most successful has been gabapentin, which seems to relieve nerve pain from cancer and AIDS. This class of drugs has a low level of side effects e.g. drowsiness, dizziness, nausea and unsteadiness...

Antidepressants have been used the past 20 years as adjuvants in pain relief; esp. the tricyclics for headaches, arthritis, chronic backaches, fibromyalgia, cancer pain and diabetic neuropathy...

Can That Headache! Botulism toxin is being used to smooth out wrinkles and quell tremors. Now a new benefit has been found: Botulism toxin seems to alleviate migraine HA's. In a preliminary study, the patients whose foreheads were injected tiny amounts of Botox reported relief from migraine up to 4 months...

Boning Up: Two million American men have osteoporosis and three million more may be at risk. The first major study on men with osteoporosis shows that Fosamax used in postmenopausal women also works in men, increasing the bone density by 7%.

Time Lapse: A report shows that melatonin (5 mg and .5 mg) is no better than a sugar pill in alleviating jet lag symptoms...

(Time Oct 11)

POTPOURRI...

"My dog is cross eyed," the man told the vet. "Is there anything you can do for him?"

"Let's have a look," the doctor said, lifting the Rottweiler in his arms...

"Hmm," the vet said, "I'm going to have to put him down."

"Just because he's crosseyed?" the incredulous owner asked.

"No," the vet replied, "because he's heavy."

Penguins mate for life... This doesn't surprise me much, because they all look alike. It's not likely they're going to meet a better-looking penguin someday.

Kathleen Tracy in *Ellen Reader's Digest* Jul '99

The income tax has made more liars in this country than the sports of fishing and golf combined...

Anonymous

"Lack of something to feel important about is almost the greatest tragedy a man may have."

Dr. Arthur Morgan

Live neither in the past nor in the future, but let each day's work absorb all your interest, energy, enthusiasm...

Sir William Osler

ONCOLOGY DIALOGUE KMC Oncology Conference 7-15-99

Case: 78 yr old man with prostate cancer...

Moderator: Radiotherapist Mark Kanemori: Prostate cancer is the No. 1 cancer in males in the U.S. The diagnosis and therapy is somewhat controversial...

Urologist Terry Yee: The patient had a transrectal ultrasound and volume studies...

Mark: Bone scan for mets is indicated only if the PSA is greater than 10. The question is whether the patient should be treated with radiation or surgery.

Terry: With surgery the patient has a 10 to 15 year survival... complications of surgery are impotence and incontinence. Usually I recommend radiation after age 70.

Urologist William Shiraki added: Over age 70, I too avoid surgery, but it also depends on the size and grade of the cancer...

Mark: The choice is now radioactive seed implants versus external beam radiation...

MEDICAL TIDBITS...

The Cabbage Cure: Five servings/d of veggies and fruits reduces ischemic strokes by 25% and 10 servings/d by 31%... Fruits and veggies esp cruciferous veggies like broccoli and cabbage as well as citrus fruits do the trick...

The Colon Checkup: This year, 130,000 Americans will learn they have a tumor of the colon or rectum...

When the cancer is discovered early, the odds of living five more years is 90%. Unfortunately less than 40% of colon-rectal cancers are discovered that soon... and 56,000 people in the U.S. will die of colon-rectal cancer, making it the second greatest cancer killer after lung cancer.

Colon Cancer Checklist:

Stool occult blood annually from age 50.

Sigmoidoscopy q 5 years.

Seek treatment for changes in bowels, fatigue and anemia.

(Time Oct 18)

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Nikki Costello
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I Left My Glasses In The Bathroom And Now I'm Disabled.

The Supreme Court of the United States is having trouble with the Americans With Disability Act. How do you define "unmitigated?" The question of evaluating a disability in unmitigated state means an untreated medical condition, but does it refer to vision without glasses? Two sisters are suing United Airlines claiming to be disabled, because they fail to meet the standard of 20/100 visual acuity uncorrected. Of course, they both see 20/20 with glasses or contacts. Seven of the nine Justices wear glasses, and they seemed to have a magical revelation when Judge Scalia waved his glasses in the air and said that under these liberal interpretations of the ADA a "majority of Americans are disabled." A United Parcel Service driver with high blood pressure wants to qualify as disabled because if he stopped his drugs he would have serious problems – although he does take his medication. The ADA was supposed to increase the number of disabled in the workplace, but actually the number has dropped by 4% since the law was passed. And no one wants to talk about the JAMA December 1997 study that provided statistical support for the notion that workers with sensory impairments have more than their share of industrial accidents.

How To Make A Medical Meeting Into A Firestorm.

The Oregon Medical Association House of Delegates voted to continue to be the only state in the land where doctors can be reimbursed by the state Medicaid plan for providing assistance to suicidal patients. By a vote of 51 to 33 physicians elected to keep state funding. Then the House voted to allow pharmacists to give "morning after" emergency contraception medications to women without a prescription. Doctors opposed to that measure were not happy with ceding the option to pharmacists, and others felt that the morning-after drugs actually are synonymous with abortion in some cases. Now, that is the kind of action that keeps delegates from dozing off at annual meetings.

Insurance \$\$ Vs. Good Legislation. Trent's Bent. Gotta Lotta Problems.

A large majority of Americans (70%) want a strong patient protection act, but the Republican Senate leadership just doesn't get it. The Senate bill, a wimpy measure that could have been written by insurance lobbyists, was passed along party lines. Contrarily, the House seems ready to modify the legislation with what is necessary to curb some HMO abuses. The patient protection legislation currently being debated in the House of Representatives is really somewhat tardy, because the states are far ahead of Congress. Thirty states (including Hawaii) have already provided for the right of patients to appeal a negative insurance company decision for independent review, forty-seven states have banned gag clauses, thirty-five states have prudent layman standards for emergency room visits, twenty-eight states provide for health plan disclosure of pharmaceutical restrictions. Get with the program, Senator Lott.

One For The Road, Mat Be Two For The Cemetery.

According to federal highway-safety officials, U.S. drunken driving deaths fell by nearly 2% last year to an all time low in the seventeen years they have been keeping such data. Total DUI deaths were 15,935, still a huge number, making up 38% of the 41,471 total traffic fatalities in 1998. Hawaii's DUI statistics show a similar change through the 15 years the local Mothers Against Drunk Driving team have worked so diligently to inform the public and monitor the courts. The Hawaii Medical Association can take some credit, because it was through the HMA Auxiliary that the Hawaii MADD program was initiated.

If At First You Don't Succeed, Redefine Success.

Theo Seiler, M.D. is a professor of ophthalmology at the Free University in Berlin, Germany. He was the first to apply excimer photoablation to the human eye in 1986 and presented the first clinical results of excimer photorefractive keratectomy in 1990. Now the professor has reported an overview on the complications of LASIK, notably iatrogenic keratectasia, the abnormal bulging of the cornea following laser surgery. The flap produced with LASIK is loose and has no mechanical tension for the cornea for at least the first year, and only the

stromal bed bears the stress originating from the intraocular pressure. Dr. Seiler reported that in correcting myopia of more than 10 diopters, keratectasia may be as high as 3%. Considering changes with age, glaucoma potential and possibility of rubbing the eyes, what will be the frequency of keratectasia in 10 or 15 years?

To Err Is Human. To Forgive Is Against Company Policy.

The Supreme Court returned a degree of sanity to the judicial process when it ruled that expert witnesses will have to rely on truth. Judges will be able to block testimony from a witness whose theory hasn't been tested or subjected to peer review. After many years of corrupt medical testimony offered by sly lawyers with an agenda, expert witnesses opinions will have to be based on sound science. In the case of silicone breast implants, David Kessler, M.D. then head of the FDA, reacted to the publicity and banned their use. Now, many torts later, and following a score of peer-reviewed studies, including the Mayo Clinic, Johns Hopkins University, University of Michigan and others, no link was found between implants and various diseases. As spoken by Dr. Marcia Angell, executive editor of the New England Journal of Medicine and author of Science on Trial, "many women developed symptoms that any woman over 25 could develop" went looking for a culprit, and decided on implants. And along the way, billions of dollars have disappeared in the legal system and a major corporation was forced to declare bankruptcy. Late at night, introspective personal injury attorneys must sometimes question the social value of their endeavors.

Frankly, I'm Getting Tired Of Scientific Progress.

Technology at the end of the 20th century has struck once again. This time it is to answer the question on every canine breeder's mind, is Fifi pregnant? Yes, the dog's adopted parents will no longer have to chase the bitch around the back yard hoping to catch some urine, nor wait until she has a blossoming abdomen. Impatient doggie parents can now take their girl to the local vet who can draw a blood sample, send it to a lab that specializes in dog testing, and in three days the answer will arrive. Of course, the question of fatherhood can still be a matter of surprise.

I Love Mankind. Iy's Just People That I Hate.

Frightening statistics in population reveal that the world's human population passed the one billion mark in 1804. By 1927, homo sapiens had doubled to 2 billion, and by 1960 we passed 3 billion, and by 1974 it was 4 billion, and 1987 the number came to 5 billion. 1999 will see 6 billion humans filling the office buildings, airports, suburbs, freeways, inner-cities, condos, K-Marts, elevators and bathrooms. Does anyone see a problem here?

If You Live Long Enough, You Find That Every Victory Turns Into Defeat.

It is getting tougher for HMOs to compete. Data collected by Weiss Ratings Inc. revealed that more than half of HMOs lost money in 1998. Touted by planners as the saving mechanism for escalating medical expenditures, 57% of HMOs collectively had \$768 million in losses last year. Harris Methodist Health Plan in Arlington, Texas, lost \$99 million to lead the red ink list. Many plans are skating on thin financial ice and are close to insolvency with lowering reserves. 100 HMOs fell below minimum risk-based capitol guidelines established by the National Assn. of Insurance Commissioners. These numbers show why so many HMOs no longer want to contract with Medicare. Could it be that the old standard indemnity plans and PPOs aren't really so wasteful after all?

ADDENDA

- ❖ Cocaine users risk of heart attack is 24 times higher than normal in the first hour after taking the drug.
 - ❖ Ancient Egyptians shaved off their eyebrows as a sign of mourning when their cats died.
 - ❖ What happens if you are scared half to death twice?
 - ❖ They call it PMS because mad cow disease was already taken.
- Aloha and keep the faith —rts■

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Cover art by Dietrich Varez, Volcano, Hawaii. All rights reserved by the artist.

Manu

Manu means "bird" in Hawaiian. Many Hawaiian birds have the long curved beak with which to extract nectar and pollen from flowers.



Norman Goldstein MD
Editor, Hawaii Medical Journal

Report to the House of Delegates at the 143rd Hawaii Medical Association Annual Meeting – Big Island, Hawaii October 29, 1999

Another Good Year for the Journal

This has been another good year for our Journal. January 2000 will mark the 60th year of continuous publication of the Hawaii Medical Journal, first published in September 1941.

As further testimony to the continued interest in the broad base of medical subjects that we publish, requests are increasing for HMJ reprints from other medical journals, both statewide and nationally.

Many thanks to News Editor Henry Yokoyama MD, whose column has been a favorite for the last 36 years, as well as to Russell T. Stodd MD, author of "The Weathervane." Both editors remind us of the importance of humor in keeping our balance. Many thanks also to our small but very efficient Editorial Staff, Becky Kendro, Drake Chinen, and our master salesman, Michael Roth. The volume of advertising pages has quadrupled in the last three years, allowing us to increase the number of editorial manuscripts.

A special mahalo to Dr. Ann Catts and Dr. Drake Will for their help in editing our manuscripts. We owe a debt of gratitude to our Peer Review Panel of more than 200 members and nonmembers of the HMA.

End of the Year Manuscripts

As we turn the calendar from December 1999 to 2000, we still have many outstanding manuscripts awaiting publication. In this issue, Theresa Danao-Camara MD and Kiwi Camara surveyed patients with chronic inflammatory polyarthritis asking about alternative therapies. This is a small but very significant study. As we see more patients presenting with copper bracelets, "special" diets, and magnets on all parts of their bodies, we would like to review results from controlled studies using some of these unconventional therapies.

Thirty years ago, I took a medical hypnosis course. The hypnotist, a former circus side show performer, made an impressive presentation. I recall one of his best lines, "Docs, you don't have to hypnotize your patients, just get their minds off what the hell you're going to do to them." Doctors Simon and James review the subject of hypnosis in this manuscript, suggesting that we should consider trained medical hypnotherapists for some of our patients undergoing surgery, smoking cessation, and weight loss.

Our Hawaii State Hospital at Kaneohe has been in the news recently and, thanks to the effort of the Health Department and Hospital staff, Kaneohe has again been certified for continued treatment of mentally disturbed patients. Patrick and Associates studied substance abuse in the 1980's and 1990's, and present good information for our interest.

Christmas Ballet

I stopped the car for Susan to shop
At the autoteller...and out she hopped.
I glanced away while she worked the machine
To study the mountains, covered in green.

My eyes returned to the front of the bank
Where she took her cash and murmured a "thank"
For modern technology which never sleeps
And gives back on holidays, the money it keeps.

She smiled as she turned to approach the car,
But such as the winds here at Christmas are -
They lifted her hat with its embroidered sash
and she lunged for it using the hand with the cash!

Those winds who targeted first her hat,
Seized on that handful of bills stacked so fat.
They swirled in the air as high as the roof
Reminiscent of movements in a *Keystone Cops* spoof!

She looked like a puppy snapping at flies,
Grasping for "twenties" espied by her eyes.
Leaping and jumping in a comic ballet
A scene I'll remember 'til I'm old and gray.

Pirouettes, and toe stands, arabesques, swan dives
Fouettes and entrechats, unusual for wives.
Then all of a sudden the wind stilled its force,
But the "twenties" recovered were deficient, of course!

A lone one was missing: I joined in the search,
Scouring the shrubs and the trees for a "perch"
At last we found. But I really must say...
I'd surely have paid it... for that Christmas Ballet.

Robert S. Flowers
August 25, 1990

Hanukkah

Lord of Hosts, this Feast of Lights
Grows one candle every night
For Hanukkah, reDedication
of Jerus'lem's restoration.

With this act that seems so simple
We remember your great temple.
How the oil kept burning bright
When fuel was there for just one night.

But let your lamp inside my heart
Burn forever...as a start!

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Medical School Hotline

The Role of Telemedicine in Medical Education

Stanley M. Saiki, Jr. MD

**Assistant Professor, Department of Medicine
Director, UH Telemedicine Project
University of Hawaii,
John A. Burns School of Medicine**

The New Age:

We live in historic times. Not since the industrial revolution has the advent of new technologies so affected our lives. In fact, one is hard pressed to think of any activity of living today that remains unaffected by the new technology. We internalize one new development after another, without stopping to pause and reflect on how profoundly our lives are touched by technological developments. When we do step back and consider the "rate of change" of our electronic revolution, we find its pace both exhilarating and terrifying. Like it or not, this pace is accelerating.

Telecommunications, but one of the arts of the electronic age, is undergoing a transformation of heroic proportions. The attainment of a "global dial-tone," phone service that brings direct connection to phones all over the globe, an immense accomplishment, is already an accomplishment overlooked, accepted as pedestrian. Wireless communication, global cellular service, mobile email, fax and data transfer capability, infrared computer links and data transfers through the human contact of a handshake, are the exotic technologies that now catch the eye.

Telemedicine: Not a Discipline

"Telemedicine—the use of advanced telecommunications technologies to exchange health information and provide health care services across geographic, time, social and cultural barriers." Jim Reid¹ provides one of the many definitions for the term. All such definitions are broad, inclusive, vague and require additional comment.

Telecommunications technologies, the electronic transfer of information, includes a number of modalities. Telephone, radio, other voice modalities, picture phones, fax, computer real time data/images, video teleconferencing (VTC), computer store and forward (enhanced email) data/images, broadcast video, world wide web pages and virtual reality are examples.

Telemedicine information, another inclusive term, includes clinical information from and about patients as well as medical education information and curricula. Computerized clinical information systems, electronic medical records organize huge amounts of clinical information into user friendly formats.

Telemedicine is not a discipline, it is a tool used in the delivery of health care. Telemedicine is a tool forged from the convergence of technologies. Advances in telecommunications, computer science, informatics, basic and clinical science and educational science have matured to allow innovations in health care delivery whose coordinated scientific application can be termed "Telemedicine" or "Telehealth".

Telehealth Hawaii:

Internationally, a renewed interest in telemedicine is powered by new technologies, lowered communications costs and increased demand for health care services. In the U.S, additional momentum has been added by changes in the structure of health care delivery systems such as managed care and capitated payment systems.

Hawaii has long been investing in telecommunications and telehealth technologies. State leaders have had the vision to anticipate the digital revolution and championed the development of the infrastructure necessary to meet our telecommunications needs. State and federal institutions in Hawaii have built networks with the bandwidth (carrying capacity) to meet anticipated needs. The private sector has been aggressive, correctly anticipating the development of telecommunications technology. The cable networks are particularly advanced in relation to the remainder of the nation.

Telemedicine and Telehealth operations have grown in Hawaii as in the rest of the US. The Department of Defense through the Tripler Army Medical Center and the AKAMAI Project have been pioneers and leaders of telemedicine, nationally and internationally. Tele-radiology in Hawaii is a mature application with proven utility. All the major community hospitals and health systems have been investigating and investing in telemedicine capabilities. The Hawaii Health Systems Corporation (HHSC) an association of State Hospitals regularly utilize telemedicine technologies. HHSC and community health centers have been recipients of grants from the Weinberg Foundation for telemedicine equipment. University of Hawaii units, such as the Schools of Nursing at Manoa and the community colleges have been using telemedicine technologies for medical education and patient care. Pilot studies using low bandwidth video phones are currently underway. Other health organizations such as third party payers, capitated health plans and medical service organizations are looking to telemedicine to improve their level of functioning.

U.H. John A. Burns School of Medicine (JABSOM):

In medical education, telemedicine is integrated into the JABSOM curriculum. Undergraduate, graduate, post graduate and continuing medical educational programs currently do, or will soon, utilize multiple modalities of telemedicine including store and forward systems as well as real time, full motion, multipoint video teleconferencing.

JABSOM faces unique challenges related to our geographic location, commitment to community based medical education and our problem based learning curriculum. These factors require small group teaching rather than the more traditional lecture hall approach. Small group teaching formats while quite advantageous for the learner, pose a greater challenge to the distance telemedicine educator. The single big group can use a single large monitor or digital projector in specially equipped rooms to allow 2 way video teleconferencing (VTC). One large group, one instructor, one telemedicine video unit, one communication charge; break that one group into 6 or 7 small group sessions and technologic as well as instructional requirements are significantly magnified. These challenges are a small hurdle to overcome when the advantages of small group learning and teaching are considered.

Telemedicine technologies at JABSOM include support for Internet based educational programs. World Wide Web based curricular

programs, store and forward (email) systems and library access are basic requirements for all students. The JABSOM M.D. program curriculum emphasizes Informatics and Evidence Based Medicine in the curriculum making access to computer networks and searchable databases essential.

Ke Ola O Hawai'i¹³ is an academic community partnership organization of which the JABSOM is a founding partner. Ke Ola is collaborating with the JABSOM Telemedicine Project to develop a system to support training of multiprofessional teams of health professions students, including medical students, in community health centers and on neighbor islands.

Ke Ola O Hawai'i has developed the Ke Ola HealthNet, which connected community-based learning centers at Waianae Coast Community Health Center, Kalihi-Palama Health Center, Queen Emma Clinics, and Kookia Kalihi Valley, as well as the Biomedical Building of the University of Hawai'i at Manoa, to the state fiberoptic network (SONET). Multiprofessional teams of students and faculty utilize the high speed connection for email communication, research, and utilization of web-based resources. Interactive video workstations provided to community health centers through the JABSOM Telemedicine Project and Weinberg Foundation will expand the resource to include distance learning through interactive video.

Additional resources are in development with support of the federal Area Health Education Center (AHEC) grant to JABSOM, which is administered through the Ke Ola partnership. These include interactive video workstations in Hilo and Maui, which will allow third year medical students in an innovative six month clerkship to remain in neighbor island training sites at Hilo and Maui without returning to the Manoa campus for weekly seminars. Facilities are also being developed at Kauai Community College to support health professions training activities for students from high school, community college, and UH Manoa, including third year medical clerkships.

The Department of Psychiatry, routinely uses point to point live VTC for administrative and educational purposes. The Departments of Medicine and Family Practice use store and forward telemedicine in support of students on rotation in the south pacific and other rural locations. All departments are keenly interested in using technology to leverage educational resources.

U.H JABSOM Telemedicine Project

The UH Telemedicine Project is a task group based in the Dean's office of the School of Medicine. The goals of the project are several. To develop a bank of telemedicine experience and intellectual assets to serve the School of Medicine, The University of Hawaii and the State of Hawaii. The project uses a collaborative approach, fostering cooperative works with other UH schools and campus organizations, community hospitals, health care organizations and state institutions.

The Project is currently setting up a clinical telemedicine network² to allow our University students, residents, faculty and community attendings and sub-specialists and other health care providers to learn to use the technologies and techniques of telemedicine both in medical education and in actual patient care. The project invites community collaboration to leverage resources.

Network connections, bandwidth, hardware, software and technical

skills needed are being integrated with the generous aid and cooperation from the UH/Information and Technology Service (ITS) and the UH Telecommunication Information and Policy Group (TIP-G). UH/ITS provides connections that will allow high speed data transfer for VTC as well as store and forward access, to the University of Hawaii system, Community College sites, as well as Waianae Coast Comprehensive Health Center, The Queen Emma Clinics, and the Kalihi Palama Community Health Center. TIP-G has developed and administers the State of Hawaii Telehealth Access Network (STAN) that allows similar connections to HHSC, the VA Regional Medical Clinic, private health care organizations and via satellite, facilities in the Pacific islands.

These broad bandwidth network connections will allow us access to a number of teaching sites for real time VTC with multipoint conferences as well as store and forward modalities. Medical education programs for individuals at all levels of training and in a multitude of different University programs will become readily available. The opportunity is now available for our graduates and faculty associated community health care providers to incorporate the use of telemedicine into their practice of medicine.

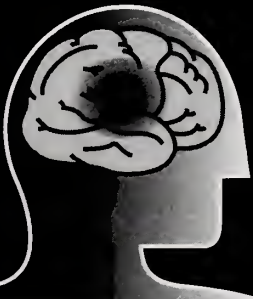
Conclusion:

An ever growing choice of developing technologies, begs the question; just because we can do a thing, does that mean we should do a thing? New technologies often emphasize style over substance, offering an elegant, stylish or ostentatious method to a simple task. Technophiles and gadgeteers are often "touched by the monkeys paw", seduced by the dark side of technology. Careful consideration and study of the true benefits from the use of these technologies remains lacking. There are some clear, obvious and undeniable benefits to the use of new technologies. Conversely, there are more subtle advantages and disadvantages that need to be carefully considered. We have the opportunity to study these technologies, to scientifically and rationally assess the utility of these technical advances.

References:

1. A Telemedicine Primer: Understanding the Issues, Jim Reid PA-C 1996 ISBN 0-9653045-0-7
2. DoD Cooperative Agreement No. DAMD17-99-2-9003
3. Ke Ola O Hawaii information provided courtesy of Dr. Carol Murry, Director

Perceptions of Stroke's Effects



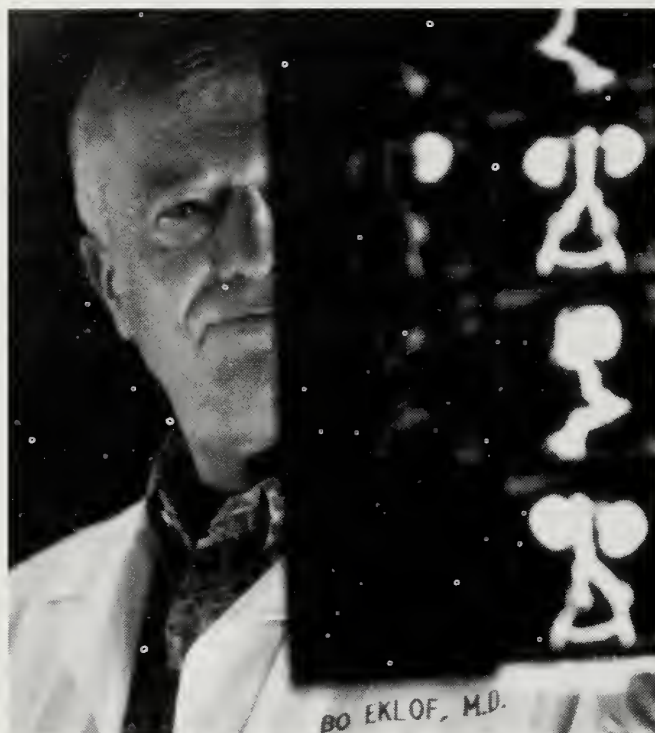
American Heart Association
Fighting Heart Disease
and Stroke

79% of people surveyed associate stroke with paralysis or weakening. A stroke is a brain attack. Common effects are:

- paralysis or weakening
- neglect of the recovering side
- trouble understanding speech
- difficulty talking or communicating
- memory lapses
- problems performing tasks

SOURCE: American Heart Association. 1995

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– Friday Noon Conference –
Luncheon

Diabetes Care in the 1990's

Mehmood A. Khan, MD

December 3, 1999, 12:30 – 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants should be able to:

- Interpret diagnosis of type II diabetes.
- Describe treatment options for type II diabetes.
- Manage obesity and diabetes care.

We would like to acknowledge the Educational Grant from Hoechst Marion Roussel.

– Friday Tumor Board Conference –
Luncheon

Assisted Suicide: A Case for Pain Management

Louis Saeger, MD

December 6, 1999, 12:30 – 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants should be able to:

- Summarize the controversial issues and motivations surrounding patients requests for assisted suicide.
- Recognize the specific and controllable aspects of pain management in these patient types, which identify the case for improved pain management.
- Manage patients pain syndromes effectively by utilizing existing standards and assessment tools.
- Describe existing legislation and arguments regarding assisted suicide (national update and impacts).

We would like to acknowledge the Educational Grant from Purdue Pharma L.P.

– Friday Noon Conference –

End-of-Life Care, Part 1: a) Advance Care Planning; b) Common Physical Symptoms; c) Anxiety, Delirium, and Depression

David C. Des Jarlais, MD & Kenneth K.H. Kau, MD

December 10, 1999, 12:30 – 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants should be able to:

- Define advance care planning and update on 1999 Hawaii legislation.
- Understand management of common physical problems in end-of-life care.
- Identify and treat depression, anxiety, and delirium in end-of-life care.

– Friday Noon Conference –

End-of-Life Care, Part 2: a) Communicating Bad News; b) Pain Management; c) Withholding, Withdrawing Therapy; d) Last Hours of Living

Randal Liu, MD & R. Gary Johnson, MD

December 17, 1999, 12:30 – 1:30 p.m.

Doctors Dining Room

Learning Objectives

At the conclusion, participants should be able to:

- Learn an approach to communication of bad news.
- Understand approach to pain management in end-of-life care.
- Describe the principles of withholding or withdrawing therapy.
- Assess and manage the pathophysiologic changes of dying.

Please call Fran Smith at 522-4471 for more information.

Awareness of, Use and Perception of Efficacy of Alternative Therapies by Patients with Inflammatory Arthropathies

Kiwi Camara and Theresa Danao-Camara MD, FACP, FACR

Abstract

Fifty one patients with chronic inflammatory polyarthritis were surveyed on unconventional treatments they used to self-treat their condition. Awareness of the availability of alternative therapies (ATs) was universal. Sixty-six percent (66%) of patients had tried one or more ATs. The most popular ATs were dietary manipulation (no red meat, dosing with vinegar and honey), the wearing of magnets and copper bracelets, and acupuncture. The best predictors of AT use were male sex, Caucasian race and formal education beyond high school. Numbers were too small to make definitive statements about perceptions of efficacy, but the users of magnets and fish oils tended to be dissatisfied with these ATs, while those who had tried bee stings, herbs and hormones claimed effectiveness.

Introduction

Alternative treatments (ATs) are widely used by patients with arthritis.¹ In the 48 contiguous states, utilization patterns favor educated, middle class persons between the ages of 25 to 49.² In a rural North Carolina study,³ African-American adults with arthritis were found to make greater use of ATs compared to European-Americans.

Hawaii is a multiracial community with no one ethnic group constituting a numerical majority. According to the 1990 Census, Caucasians comprise 33.4% of the population, Japanese 22.3 %, Filipinos 15.2 %, Hawaiians and part-Hawaiians 12.5%; the remaining 16.6% include the Chinese, Portuguese, Koreans and a smattering of other races. The authors embarked upon this study with the hypothesis that non-Caucasians closer to the Asian medical traditions would use ATs more frequently.

Methods

Fifty one consecutive adult patients with inflammatory arthropathies from the islands of Kauai and Oahu were administered an in-office survey about their awareness of, use and impressions of efficacy of 23 ATs. The list was gleaned from a patient-information brochure published by the Arthritis Foundation on unproven remedies, and supplemented by the clinical experience of one of the authors (TDC). The ATs were: acupuncture, alfalfa, bee stings, black walnuts, chiropractic, copper bracelets, fasting, fish oils, herbs, homoeopathy, hormones, the "immune power diet", magnets, "metabolic therapy", elimination of red meat from the diet, elimination of pork, avoidance of nightshade vegetables, the use of plant oils, reflexology, tai chi, vaccines, and drinking vinegar and honey. The survey was explained by the attending physician, and the patients were asked to complete the survey privately. Completed surveys were sealed, collected and collated in a manner that preserved the patient's anonymity.

Results

The 51 patients completing the survey had a mean age of 51 years (range 26 to 81) and a mean disease duration of 9 years (range 1-42). The male-to-female ratio was 10:41, in accord with the known predominance of inflammatory arthropathies in females. The average number of years of formal education did represent graduation from high school (mean 13 years; range 2 to 24). Self-reported racial classification results were as follows: Caucasian 13, Japanese 13, Filipinos 5, Chinese 3, Pacific Islander 5, African American 1, mixed race 11.

Awareness of ATs was universal. Every single patient reported having heard of the utility of at least one of the ATs in the list for his/her condition (Table 1). Over two-thirds (69%) of the group had tried at least one AT. The most popular ATs were dietary manipulation, magnets, copper bracelets and acupuncture.

The following demographic subgroups admitted to the most AT use: males, Caucasian race, and formal education beyond high school (Table 2).

User subgroup numbers were too small to make definitive statements about perceptions of efficacy, but users of magnets, fish oils and acupuncture tended to report dissatisfaction with the results they had obtained. (Table 3).

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Table 1. Awareness of Alternative Therapies per Demographic Group*

	Total who have heard of it	Disease Duration	Disease Duration	Age	Age	Yrs of Formal Educa- tion	Yrs of Formal Educa- tion	Sex	Sex	Race	Race
Item		≤ 5 yrs	> 5 yrs	≤ 40 yrs	> 40 yrs	≤ 12 yrs	> 12 yrs	Male	Female	Cauca- sian	Asian
Acupunc- ture	43 84	23 88	20 80	14 100	29 78	22 78	21 91	9 90	34 83	11 85	19 90
Alkalif	21 41	10 38	11 44	6 43	15 40	10 36	11 48	5 50	16 39	7 54	8 38
Bee Stings	25 49	12 46	13 52	7 50	18 49	12 43	13 56	5 50	20 49	7 54	11 52
Black Walnuts	5 10	2 8	3 12	1 7	4 11	3 11	2 9	1 10	4 10	1 8	2 9
Chiro- practor	27 53	13 50	14 56	9 64	18 48	13 46	14 60	4 40	23 56	9 69	9 43
Copper Bracelet	38 75	21 81	17 68	11 78	27 73	17** 61	21** 91	7 70	31 76	11 84	17 81
Fasting	16 31	10 38	5 20	6 43	10 27	7 25	9 39	3 30	13 32	4 30	5 24
Fish Oils	26 51	13 50	13 52	8 57	18 48	11 39	15 65	8** 80	18** 44	8 61	12 57
Herbs	29 57	15 58	14 56	11 78	18 49	16 57	13 56	5 50	24 58	7 54	12 57
Homeo- pathy	14 27	6 23	8 32	7** 50	7** 19	5 17	9 41	3 30	11 37	7** 54	3** 14
Hor- mones	12 24	6 23	6 24	4 28	8 22	5 17	7 30	1 10	11 27	4 30	5 24
"Immune Power Diet"	6 12	0** 0	6** 24	2 14	4 11	2 7	4 17	0 0	6 15	3** 23	1** 4
Magnets	27 53	17 65	10 40	8 57	19 51	15 53	12 52	4 40	23 56	5 38	14 67
Metabolic Therapy	2 4	0 0	2 8	1 7	1 3	1 3	1 4	0 0	2 5	1 8	1 4
No Meat	19 37	10 38	9 36	6 43	13 35	11 39	8 35	4 40	15 36	6 46	6 28
No Night- shades	14 27	5 19	9 36	4 28	10 27	7 25	7 30	3 30	11 27	4 30	6 28
No pork	14 27	9 35	5 20	1** 7	13** 35	9 32	5 22	4 40	10 24	3 23	6 28
No Red Meat	20 39	10 38	10 40	4 28	16 43	12 42	8 35	5 50	15 36	6 46	9 43
Plant Oils	9 18	5 19	4 16	4 28	5 13	5 18	4 17	3 30	6 15	1 8	4 19
Reflex- ology	12 24	8 31	4 16	5 32	7 19	2** 7	10** 43	2 20	10 24	6 46	4 19
TaiChi	22 23	13 50	9 36	9 64	13 35	9 32	13 56	6 60	16 39	5 38	8 38
Vaccines	8 16	2 8	6 24	1 7	7 19	5 18	3 13	2 20	6 15	3 23	4 19
Vinegar & Honey	25 49	10 38	15 60	7 50	18 35	12 43	13 56	5 50	20 48	6 46	4 19
Total in subgroup	51	26	25	14	31	28	23	10	41	13	21

* Data expressed as N % of Total

** Chi square statistic significant at 5%

Table 2. AtUse PerDemographic Group*											
		Disease Duration	Disease Duration	Age	Age	Yrs of Formal Educa- tion	Yrs of Formal Educa- tion	Sex	Sex	Race	Race
	Total who have Used it	≤ 5 yrs	> 5 yrs	≤ 40 yrs	> 40 yrs	≤ 12 yrs	> 12 yrs	Male	Female	Cauca- sian	Asian
Acupunc- ture	9	5 19	4 16	3 21	6 16	3 11	6 26	1 10	8 19	4 31	4 19
Aloha	3	0 0	3 12	1 7	2 5	1 4	2 9	2 20	1 2	1 8	2 10
Bee Stings	2	0 0	2 8	0 0	2 5	2 7	0 0	0 0	2 5	0 0	2 10
Black Walnuts	0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Chiro- practor	7	5** 19	2** 8	3 21	4 8	3 11	4 17	2 20	5 12	0 0	2 10
Copper Bracelet	11	8 31	3 12	3 21	8 21	7 25	4 17	1 10	10 24	1 8	5 24
Fasting	3	2 8	1 4	1 7	2 5	2 7	1 4	2 20	1 2	2 26	1 5
Fish Oils	12	4 15	8 32	4 28	8 21	6 21	6 26	3 30	9 22	5 38	4 19
Herbs	4	3 12	1 4	2 14	2 5	2 7	2 9	3** 30	1** 2	1 8	1 5
Homeo- pathy	3	1 4	2 8	1 7	2 5	2 7	1 4	0 0	3 7	1 8	1 5
Hor- mones	2	1 4	1 4	1 7	1 2	1 4	1 4	0 0	2 5	2 26	0 0
"Immune Power Diet"	1	0 0	1 4	1 7	0 0	0 0	1 4	0 0	1 2	1 8	0 0
Magnets	9	6 23	3 12	4 28	5 14	4 14	5 22	1 10	8 19	2 26	4 19
Metabolic Therapy	1	0 0	1 4	0 0	1 2	1 4	0 0	0 0	1 2	0 0	0 0
No Meat	8	3 12	5 20	4 28	4 8	3 11	5 22	1 10	7 17	5 38	2 10
No Night- shades	7	2 8	5 20	2 14	5 14	3 11	4 17	2 20	5 12	3 23	1 5
No pork	7	4 15	3 12	0 0	7 19	4 14	3 13	2 20	5 12	2 23	2 10
No Red Meat	11	4 15	7 28	3 21	8 21	7 25	4 17	4 40	7 17	5 38	3 14
Plant Oils	2	1 4	1 4	2** 14	0** 0	1 4	1 4	1 10	1 2	1 8	0 0
Reflex- ology	4	2 8	2 8	2 14	2 5	0** 0	4** 17	0 0	4 9	1 8	1 5
TaiChi	1	1 4	0 0	1 7	0 0	1 4	0 0	0 0	1 17	0 0	0 0
Vaccines	1	1 4	0 0	0 0	1 2	1 4	0 0	1 10	0 0	0 0	0 0
Vinegar & Honey	11	4 15	7 28	4 28	7 19	5 18	6 26	2 20	9 22	1 8	4 19
Ave # Items used	2.30	2.19	2.48	2.00	2.08	2.11	2.61	2.80	2.22	2.90	1.62

* Data expressed as N % of Total

** Chi square statistic significant at 5%

*** T Statistic not significant between demographic subgroups

Table 3. Perception of Efficacy			
Alternative Treatment	Number Using	# who think it is effective (%)	# who think it is ineffective (%)
Acupuncture	9	3 (33)	6 (67)
Aloha	3	2 (67)	1 (33)
Bee Stings	2	2 (100)	0 (0)
Black Walnuts	0	0	0
Chiropractor	7	4 (57)	3 (43)
Copper Bracelet	11	4 (36)	7 (64)
Fasting	3	2 (67)	1 (33)
Fish Oils	12	4 (33)	8 (67)
Herbs	4	4 (100)	0 (0)
Homeopathy	3	2 (67)	1 (33)
Hormones	2	2 (100)	0 (0)
"Immune Power Diet"	1	1 (100)	0 (0)
Magnets	9	1 (11)	8 (89)
Metabolic Therapy	1	1 (100)	0 (0)
No Meat	8	4 (50)	4 (50)
No Nightshades	7	4 (57)	3 (43)
No pork	7	4 (57)	3 (43)
No Red Meat	11	6 (55)	5 (45)
Plant Oils	2	1 (50)	1 (50)
Reflexology	4	2 (50)	2 (50)
Tai Chi	1	1 (100)	0 (0)
Vaccines	1	1 (100)	0 (0)
Vinegar & Honey	11	4 (36)	7 (64)

Discussion

The interest in and use of unproven remedies is widespread in the United States and cuts across race, gender and age groups. In this study, educated male Caucasians still appear to be the highest users of ATs, confirming the trend reported by Eisenberg et al (2). This is true even in Hawaii, where multiple Asian cultures and their medical systems and practitioners exist side-by-side with conventional allopathic medicine. This is information that is important to the providers and payers of health care, suggesting that insurers marketing to the employed, educated Caucasian male may gain a marketing advantage by paying attention to ATs.

Two possible design features may have resulted in the underreporting of AT use by Asians. First, many Asians still consider the patient-physician relationship as patriarchal, and patients may have hesitated (despite reassurances of anonymity) to admit using modalities that their physician did not prescribe or could object to. Second, the list of ATs may not have adequately included treatments routinely used by Asian cultures, having been generated from a patient information brochure designed for the average American on the mainland.

The impressions of efficacy reported by the surveyed patients are difficult to interpret. No methodologic standardization could be undertaken given the study design. Only superficial descriptions of satisfaction were obtainable, subjectively and retrospectively. Nonetheless, these broad strokes point to those areas that may lend themselves most easily to prospective, controlled trials.

Since this survey was conducted, many other ATs have entered the Hawaii market, mostly in the form of herbal encapsulations and supplements. These preparations get to patients via retail stores, direct mail, multi level marketers and alternative practitioners. Further study of patterns of spending, use and perceived effectiveness, as well as prospective controlled trials of usefulness, tolerability and side effects need to be pursued.

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1. Resch KL, Hill S, Ernst E. Use of complementary therapies by individuals with "arthritis". *Clin Rheumatol* 1997;16:391-395.
2. Eisenberg DM, Kessler RC, Foster C et al. Unconventional medicine in the United States—prevalence, costs, and patterns of use. *N Engl J Med* 1993;328:246-252.
3. Arcury TA, Bernard SL, Jordan JM, Cook HL. Gender and ethnic differences in alternative and conventional arthritis remedy use among community-dwelling rural adults with arthritis. *Arthritis Care Res* 1996;9:384-390.

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it makes us want to hold a little seminar for the V-6 engineers at Audi, General Motors and Honda (well, every car company, really) so they can learn how it should be done."

**—Automobile Magazine, July 1999,
in an article about the 2000 Maxima**



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Trends Across Two Time Periods in the Diagnosis of Substance Abuse Comorbidity at the Hawaii State Hospital

Vijayalakshmy Patrick MD, Earl S. Hishinuma PhD and Joseph Pehm MSW, LSW

Abstract

This study investigates the changes from the late 1980s to early 1990s of comorbidity (mental illness plus substance abuse) at the Hawaii State Hospital. For the 1990s, a prevalence rate ranging from 14.2% to 30% was estimated, with the latter figure based on a closer review of the records. A higher proportion of comorbid clients were single, and compared to the non-abusers (i.e., patients diagnosed with only schizophrenia or affective disorder), a higher percentage were male and had an educational level less than high school. There was an increase in the percent of non-abusers and substance abusers, but a decrease in the dual diagnosed. The implications of these findings are discussed.

Introduction

Dual diagnosis of mental illness and substance abuse has been clinically well-recognized and there is a substantial literature on prevalence, diagnosis, and treatment. For individuals with substance abuse comorbidity, varying rates of prevalence have been reported in different client groups. In the general population among those with mental disorders, 28% had an addictive illness.¹ Individuals with drug disorders had a 53% rate of dual diagnosis, and alcoholics had a 37% rate of comorbidity. In the psychiatric population, prevalences have ranged from 30-80%²⁻⁵ with an even higher rate of 94% being reported in a prison population.⁶ A trend towards increased admissions of comorbid patients has been seen among veterans from 23% in 1976 to 44% in 1988.⁷ The characteristics of the dual diagnosed have been as follows: young, male, homeless, tendency to use emergency services frequently, and higher hospitalization and incarceration rates.⁸⁻¹⁴ However, no differences have been found on educational level and marital status.¹¹

These and other previous studies have provided a wealth of important findings. However, more research is needed on at least two fronts: more investigations are necessary that examine population changes across time, and the effects of institutional and societal changes that may affect admission rates need to be researched more closely.

The circumstances associated with the Hawaii State Hospital (HSH) provided the opportunity to study these areas. First,

admission and discharge records at the HSH are intact such that a study could be conducted examining admission rates across time. Second, four events occurred between 1990-92: (a) The HSH went through an organizational transition where direct admissions from emergency rooms ceased. Prior to that time, the HSH accepted referrals from emergency rooms and the Hawaii Correctional System, resulting in patients being admitted who were homeless, chronically mentally ill, or forensic in nature. Subsequent to 1990, however, only patients referred by the correctional system were admitted. The purpose of this change was to decrease the patient-to-staff ratio and limit over-crowding. Subsequently, the bed occupancy decreased by approximately 30% (b) Another related change was that the HSH went under a U.S. Department of Justice mandate requiring improvement of services. This facilitated the reduction of the patient-to-staff ratio. The decreased patient loads enabled staff to complete more extensive assessments and to provide more effective treatments (c) The HSH became a university-based institution and a training site for medical students and psychiatric residents. As a result, a more systematic approach to diagnosis was implemented (e.g., standardized screening methods). And (d) external to the HSH, throughout the past decade, there has been a trend of increased substance abuse in Hawaii especially with highly addictive substances (e.g., crystal methamphetamine, crack cocaine).¹⁵⁻¹⁶

The specific purposes of the present investigation were as follows: (a) To examine admission rates at the HSH and compare these figures for Period 1 (1984-89; prior to changes in the institution) vs. Period 2 (1990-94). It is hypothesized that Period 1 will have a significantly higher rate of admissions than Period 2 due mainly to the institutional policies at that time.

(b) To investigate the relative rates between periods for patients with the following diagnoses: non-substance abuse (i.e., schizophrenic and/or affective disorder), substance abuse (only), dual diagnosis (mental disorder plus substance abuse), and other. It is hypothesized that there will be a significant increase in the percent of admissions for substance abusers and for the dual diagnosed from Period 1 to Period 2 due mainly to the exclusive forensic referrals, more systematic assessments, and increased substance use in Hawaii for Period 2.

(c) To determine whether there are any age-based trends for the comorbid group across periods. It is hypothesized that there will be no significant trends in age across periods and that the majority of subjects will be in the younger age ranges.

(d) To investigate, on an exploratory level, the relationship

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between groups without substance abuse and those dual diagnosed as a function of gender, marital status, and educational attainment across periods. Based on prior research findings, there should be a higher ratio of males, but no other differences should be found.

(e) To study the substances abused, Axis I disorders, and Axis II disorders of the dual diagnosed across periods. It is hypothesized that one of the highest rates of mental disorders comorbid with substance abuse will be antisocial personality disorder, as reported in the literature.¹⁷⁻¹⁹

Methods

Participants

Subjects consisted of patients admitted to the HSH from 1984-94. The HSH is the only state psychiatric facility in the Hawaiian Islands, and thus, serves a multicultural population reflective of Asian-Pacific Islanders. Although ethnicity data were not coded for each subject for this study, the approximate breakdown of the patient population at the HSH is as follows: 32% Caucasian, 3% Chinese, 13% Filipino, 21% Hawaiian/Part-Hawaiian, 17% Japanese, and 14% mixed or other.

Procedures

Medical records were examined and admission frequencies were obtained for each year from 1984-94. The data were coded to represent two different time periods: (a) Period 1 = 1984-89, and (b) Period 2 = 1990-94. It should be noted that during the 1990s, a more systematic approach was used to assess patients. For example, the use of reliable and valid instruments became standard.

Patients who were admitted, discharged, and then readmitted all within the same calendar year were represented in the data only once. Participants who were admitted in one year and discharged, and then readmitted in a following calendar year were represented as many times as readmissions occurred in different calendar years. This set of circumstances occurred due to the manner in which the HSH's records were organized. However, the percentage of such patients was only 9-12%, thus unlikely to affect the major conclusions of this study.

For discharged patients, diagnoses were based on the discharge summaries. For inpatients not yet discharged, their diagnoses were based on current psychiatric assessments. Axis I diagnoses were categorized into four groups: (a) non-abusers (i.e., schizophrenia and/or affective disorders only), (b) substance abusers only, (c) dual diagnosis (i.e., mental illness plus substance abuse), and (d) "other" for those not falling into any of the previous categories. For all dual-diagnosed patients, basic demographics of age range and year of admission were recorded. Five age ranges were utilized: 19-30, 31-40, 41-50, 51-60, and 61-70.

A subgroup of subjects were randomly selected from the larger pool of dual-diagnosed and non-abusing clients. However, in reviewing the records for the non-abusers, substance abuse was mentioned in the assessment and progress notes, but was not reflected in the final diagnosis. These subjects were not included in the random sample (37% from Period 1; 31% from Period 2). For the remaining subjects, the following were recorded: gender, marital status, and educational attainment. For the dual-diagnosed subgroup, additional data were gathered: substance that was abused, Axis I comorbid diagnosis, and Axis II comorbidity.

Results

For each year from 1984-94, the following numbers of patients were admitted: Period 1 = 612, 591, 675, 642, 766, & 841; Period 2 = 460, 339, 452, 357, & 223. Significantly more admissions occurred per year during Period 1 (1984-89) with an average (mean) of 687.8 patients than Period 2 (1990-94) with an average of only 366.2 clients ($t[9] = 5.48, p < .001$).

Table 1 includes the number and percent of types of patients by period. A test of significance revealed that the diagnostic percentages were different across the two periods ($\chi^2[3] = 169.9, p < .001$). Subsequent analyses indicated that there was a statistically lower percentage of patients with schizophrenia and/or affective disorder in Period 1 (34.0%) as compared to Period 2 (47.8%), and for clients who were substance abusers in Period 1 (5.8%) as opposed to Period 2 (9.8%). However, this trend was reversed for dual-diagnosed patients where a larger percentage was obtained in Period 1 (23.0%) as opposed to Period 2 (14.2%). The proportion of "other" diagnoses was also higher for Period 1 (37.2%) than Period 2 (28.2%).

Table 2 presents the number of dual-diagnosed participants by age range and period. There was a significant difference in the age proportions across the two periods ($\chi^2[4] = 44.8, p < .001$). Subsequent analyses revealed that of the dual diagnosed falling in the 19-30 age range, a significantly greater proportion was admitted in Period 1 (55.1%) as compared to Period 2 (33.8%). However, the converse was found for the 31-40 and 41-50 age ranges whereby significantly higher percentages were found in Period 2 (40.8% and 18.8%, respectively) than in Period 1 (27.0% and 10.0%, respectively). No significant differences were found between periods for the 51-60 and >60 age ranges.

In examining the random sample of non-abusers vs. dual diagnosed (see Table 3), the ratio of males to females was larger for the dual diagnosed than for the non-abusers in Period 2 and for both periods combined. Although there were no significant differences in the marital-status proportions across the two time periods, there was a significant difference in the marital-status ratios when examining the dual-diagnosed only, with a higher ratio for those who were single (i.e., 5 married, 22 separated or divorced, and 70 single; $\chi^2[2] = 70.4, p < .001$). In addition, the ratio of those who graduated from high school (or above) to those who did not was larger for non-abusers than for patients with dual diagnosis. This finding was statistically significant for each period examined alone, and for both periods combined. Overall, the high school graduation rate for the dual diagnosed was only 43% in comparison to the 79% rate for non-abusers.

Table 4 presents the frequency, percent, and confidence interval of substances abused for the dual-diagnosed subgroup. Polysubstance, alcohol, and marijuana abuse occurred most frequently. There was a significant increase in *self-reported* use of alcohol (44.4% for Period 1 vs. 67.4% for Period 2) and for marijuana (20.4% for Period 1 vs. 46.5% for Period 2).

The frequencies and percents of Axis I comorbidity are presented in Table 5 for the dual-diagnosed subgroup. Schizophrenia was the most frequent diagnosis followed by affective disorder. No significant difference was found between periods for all comorbid diagnoses. Table 6 displays the data on Axis II comorbidity. Period 2 (25.6%) had a greater percent of patients with anti-social personality

disorder as compared to Period 1 (9.3%). No other significant difference was found.

Discussion

A dramatic decrease in overall admissions was confirmed by the

results. This was not surprising given the changes that occurred across the two time periods. To limit over-crowding and to increase the quality of services provided by the HSH, direct admissions from emergency rooms ceased and only patients referred by the correctional system were admitted.

Table 1. — Frequency, Percent, and Confidence Interval by Diagnosis and Period

Psychiatric Diagnosis	Period 1 (1984-89)			Period 2 (1990-94)			χ^2 (df = 1)	p value if <.05
	Freq.	%	Confidence Interval (95%)	Freq.	%	Confidence Interval (95%)		
Schizophrenia &/or affective disorder	1404	34.0%	32.6-35.5%	875	47.8%	45.5-50.1%	101.8	< .001
Substance abuse	240	5.8%	5.1-6.6%	180	9.8%	8.5-11.3%	31.2	< .001
Dual diagnosis	948	23.0%	21.7-24.3%	260	14.2%	12.7-15.9%	60.4	< .001
Other	1535	37.2%	35.7-38.7%	516	28.2%	26.2-30.3%	45.6	< .001
Total	4127	100%		1831	100%			

Table 2. — Frequency, Percent, and Confidence Interval of Dual-Diagnosed Patients by Age Range and Period

Age Range	Period 1 (1984-89)			Period 2 (1990-94)			χ^2 (df = 1)	p value if <.05
	N	%	Confidence Interval (95%)	N	%	Confidence Interval (95%)		
19-30	522	55.1%	51.9-58.2%	88	33.8%	28.4-39.8%	36.7	< .001
31-40	256	27.0%	24.3-29.9%	106	40.8%	35.0-46.8%	18.4	< .001
41-50	95	10.0%	8.3-12.1%	49	18.8%	14.6-24.0%	15.1	< .001
51-60	48	5.1%	3.8-6.6%	11	4.2%	2.4-7.4%	0.3	
>60	27	2.8%	2.0-4.1%	6	2.3%	1.1-4.9%	0.2	
Total	948	100%		260	100%			

Table 3. — Frequency of Randomly Selected Non-Abusing and Dual-Diagnosed Patients by Period Based on Sex, Marital Status, and High School Education

	Period 1		Period 2		Periods Combined	
Variable	Non- Abusers (<i>N</i> = 42)	Dual- Diagnosed (<i>N</i> = 54)	Non- Abusers (<i>N</i> = 36)	Dual- Diagnosed (<i>N</i> = 43)	Non- Abusers (<i>N</i> = 78)	Dual- Diagnosed (<i>N</i> = 97)
Gender						
Male	25	38	24	37	49	75
Female	17	16	12	6	29	22
(<i>df</i> = 1)	($\chi^2 = 1.2$; <i>p</i> > .05)		($\chi^2 = 4.2$; <i>p</i> < .05)		($\chi^2 = 4.4$; <i>p</i> < .05)	
Marital status						
Married	4	3	3	2	7	5
Separated, divorced	6	13	10	9	16	22
Single	32	38	23	32	55	70
(<i>df</i> = 2)	($\chi^2 = 1.7$; <i>p</i> > .05)		($\chi^2 = 1.0$; <i>p</i> > .05)		($\chi^2 = 1.0$; <i>p</i> > .05)	
Education						
Less than high school graduate	10	35	6	20	16	55
High school graduate or greater	32	19	30	23	62	42
(<i>df</i> = 1)	($\chi^2 = 16.0$; <i>p</i> < .001)		($\chi^2 = 7.9$; <i>p</i> < .01)		($\chi^2 = 23.5$; <i>p</i> < .001)	

Table 4. — Frequency, Percent, and Confidence Interval of Substance Abused by Period for the Randomly Selected, Dual-Diagnosed Patients

Substance Abused	Period 1 (1984-89)			Period 2 (1990-94)			χ^2 (df = 1)	p value if <.05
	N	%	Confidence Interval (95%)	N	%	Confidence Interval (95%)		
Polysubstance	28	51.9%	38.9-64.6%	19	44.2%	30.4-58.9%	0.6	
Alcohol	24	44.4%	32.0-57.6%	29	67.4%	52.5-79.5%	5.1	< .05
Marijuana	11	20.4%	11.8-32.9%	20	46.5%	32.5-61.1%	7.5	< .01
Methamphetamine	10	18.5%	10.4-30.8%	6	14.0%	6.6-27.3%	0.4	
Cocaine	9	16.7%	9.0-28.7%	12	27.9%	16.7-42.7%	1.8	
Phencyclidine (PCP)	1	1.9%	0.3-9.8%	3	7.0%	2.4-18.6%		
Heroin	1	1.9%	0.3-9.8%	3	7.0%	2.4-18.6%		
Barbiturates	1	1.9%	0.3-9.8%	3	7.0%	2.4-18.6%		
Lysergic Acid Diethylamide (LSD)	1	1.9%	0.3-9.8%	3	7.0%	2.4-18.6%		
Anticholinergics	0	0.0%	0.0-6.6%	1	2.3%	0.4-12.1%		
Total	54*			43*				

[Note: *Sums of columns do not add up to the total indicated because patients could be categorized with more than one substance abuse. Rows with a percent equal to or greater than 10% were tested with chi square.]

Table 5. — Frequency, Percent, and Confidence Interval of Axis I Comorbidity by Period for the Radnomy Selected, Dual-Diagnosed Patients

Psychiatric Diagnosis	Period 1 (1984-89)			Period 2 (1990-94)			χ^2 (df = 1)	p value if <.05
	N	%	Confidence Interval (95%)	N	%	Confidence Interval (95%)		
Schizophrenia	22	40.7%	28.7-54.0%	23	53.5%	38.9-67.5%	1.6	
Affective disorder	15	27.8%	17.6-40.9%	10	23.3%	13.2-37.7%	0.3	
Organic brain disorder	6	11.1%	5.2-22.2%	2	4.7%	1.3-15.5%	1.3	
Schizo-affective	6	11.1%	5.2-22.2%	2	4.7%	1.3-15.5%	1.3	
Mental retardation	4	7.4%	2.9-17.6%	4	9.3%	3.7-21.6%		
Dysthymic disorder	1	1.9%	0.3-9.8%	0	0.0%	0.0-8.2%		
Anxiety disorder	1	1.9%	0.3-9.8%	0	0.0%	0.0-8.2%		
Schizophreniform disorder	1	1.9%	0.3-9.8%	1	2.3%	0.4-12.1%		
Adjustment disorder	0	0.0%	0.0-6.6%	3	7.0%	2.4-18.6%		
Total	54*			43*				

[Note: *Sums of columns do not add up to the total indicated because patients could be categorized with more than one psychiatric disorder. Rows with a percent equal to or greater than 10% were tested with chi square.]

Table 6. — Frequency, Percent, and Confidence Interval of Axis II Comorbidity by Period for the Randomly Selected, Dual-Diagnosed Patients

Psychiatric Diagnosis	Period 1 (1984-89)			Period 2 (1990-94)			χ^2 (df = 1)	p value if <.05
	N	%	Confidence Interval (95%)	N	%	Confidence Interval (95%)		
Antisocial	5	9.3%	4.0-19.9%	11	25.6%	14.9-40.2%	4.6	< .05
Mixed	3	5.6%	1.9-15.1%	0	0.0%	0.0-8.2%		
Histrionic	2	3.7%	1.0-12.5%	1	2.3%	0.4-12.1%		
Schizotypal	2	3.7%	1.0-12.5%	0	0.0%	0.0-8.2%		
Passive aggressive	2	3.7%	1.0-12.5%	1	2.3%	0.4-12.1%		
Borderline	2	3.7%	1.0-12.5%	0	0.0%	0.0-8.2%		
Dependent	1	1.9%	0.3-9.8%	0	0.0%	0.0-8.2%		
Narcissistic	0	0.0%	0.0-6.6%	3	7.0%	2.4-18.6%		
Schizoid	0	0.0%	0.0-6.6%	1	2.3%	0.4-12.1%		
Total	54*			43*				

[Note: *Sums of columns do not add up to the total indicated because patients could be categorized with more than one psychiatric disorder. Rows with a percent equal to or greater than 10% were tested with chi square.]

The hypothesis that there would be an increase in substance abuse and dual diagnosis was only partially supported. A greater percent of patients was admitted with substance abuse in Period 2 as compared to Period 1, but the converse was found for dual diagnoses. It is difficult to determine the exact reasons for these findings given the factors that may have affected the admission rates and diagnoses. Assuming that these findings are valid, they indicate that in the 1990s, the courts referred a larger proportion of patients to the HSH who were either schizophrenic, had an affective disorder, or had a substance abuse problem, and that these diagnoses may be more representative of the prison population.

However, for both periods, the figures on substance abusers and the dual diagnosed may be under-estimates because the data were based on patient self-reports.²⁰⁻²² The exclusive forensic population of Period 2 would be expected to have provided even greater under-estimates. Galletly et al.²¹ found considerable discrepancies between patients' self-report of recent drug intake and the results of urine drug screening. As possible causes, Drake, Alterman, and Rosenberg²³ discussed minimization and distortion due to cognitive impairment or psychosis. The less systematic assessment approach in Period 1 may have resulted in under-estimates of substance abuse. Further, substance-induced delusional, hallucinatory, and mood disorders could have been misdiagnosed as schizophrenia or affective disorder. Several investigators have alluded to the difficulty in making an accurate diagnosis.^{13,24}

Another factor to consider in Period 2 is that because the HSH ceased to admit directly from emergency rooms, there was the possibility that many patients were "criminalized" in order to gain access to the HSH. This would explain the increase in admissions

for non-abusers in Period 2. Consequently, this increase in non-abusers would have indirectly decreased the percent of dual-diagnosed patients.

A final mechanism for under-estimations involves the finding that approximately one-third of the randomly selected non-abusers had some indication of substance abuse (e.g., these patients were provided treatments consistent with substance abuse). Although this under-estimation was expected to have been greater for Period 1 than Period 2, approximately the same percent was found for both periods. Drake, Alterman, and Rosenberg²³ included lack of awareness, inattention to substance abuse as a problem, and unfamiliarity with standard modes of assessment by mental health clinicians as factors contributing to the failure to report substance abuse in psychiatric populations. In the case of the HSH, because of its university collaboration and in spite of better assessment by university psychiatrists, it is more likely that under-diagnosis was due simply to failure to include substance abuse as a diagnosis in the patients' discharge summaries.

It is suggested that the effects of 9-12% of the patients who were counted more than once within a period was negligible with regard to the relative prevalence rates. In other words, if the distribution of the 9-12% was similar to the overall rates for each of the four categories of patients, then the rates for each type of patient would remain approximately the same. Even if the distribution was dissimilar between the 9-12% and the overall population, the rates of the four categories should not change considerably (i.e., only by 1-2%).

With these factors in mind, the 14.2% prevalence rate for substance abuse comorbidity for the more recent Period 2 is probably an

under-estimation. Perhaps a figure closer to 30% would be more accurate for this culturally diverse population at the HSH.

With regard to age effects, there was a relative increase of the dual-diagnosed admitted in the 31-40 and 41-50 age ranges in Period 2 indicating that an older group was abusing drugs and being referred and admitted to the HSH. This finding was contrary to that found in the literature.

The present study found that the dual diagnosed were primarily single males who did not complete high school. In comparison to non-abusers, a higher ratio of males-to-females and noncompletion-of-high-school to completion was found for patients who had substance abuse comorbidity.

Polysubstance, alcohol, and marijuana were the most frequently abused drug categories. In examining across periods, an increase in both alcohol and marijuana use was found. However, this may have been a result of the more systematic approach to assessment in Period 2. In particular, every patient was assessed about his or her use of drugs.

Schizophrenia was the most commonly diagnosed category in both periods among the dually diagnosed population, but no differences were found across periods for all of the Axis I diagnostic categories. Axis II antisocial personality disorder was the most commonly diagnosed personality disorder which was consistent with findings of other researchers. A significant increase in the percentage of patients with antisocial personality disorder was found across periods perhaps due to the exclusive referrals from the correctional system in Period 2.

Conclusion

There are several implications of the results of this study for clinicians. Prevalence rates of comorbid diagnoses must be made cautiously in light of various factors that may cause either an under- or over-estimation. Taking into account such variables, the present investigation suggests a prevalence rate of dual diagnosis at approximately 30% of this culturally diverse, forensic population at the HSH. This means that about one-third of the entire patient population may have both a mental disorder and substance abuse. This has serious implications for program development, implementation, and evaluation.

Additional factors that may have important ramifications regarding intervention programs include the relatively higher proportion of the dual diagnosed having an educational level less than high school. The type of treatment and rehabilitation may have to be altered given the educational achievement level, and there may be a need for greater emphasis on academic and vocational retraining for this comorbid group. The older age, diagnosis of schizophrenia, increased use of alcohol and marijuana, and increased comorbid prevalence of antisocial personality disorder may also be possible factors to consider in programming.

When an institution like a state psychiatric hospital exclusively admits only forensic patients, further research is needed on such effects including the possibility of "criminalizing" the mentally ill. What are the effects on the clients when they are "criminalized?" If there are adverse effects, how can the system be changed? Longitudinal studies may be necessary in this regard.

A final implication is related to substance-abuse diagnosis. Mental health clinicians should be more meticulous in their record

keeping of formal diagnoses such as substance abuse. In addition, structured diagnostic interviews rather than retrospective review of medical records should allow one to make more definitive statements. In conjunction with self-reports and standardized screening instruments, it may be prudent to include laboratory evidence for substance use in diagnostic assessments. Given that there could be a time lag between arrest and admission to the hospital, laboratory assessments may need to be conducted at different points in time: at the time of the arrest, upon admission, and when psychotic symptoms stabilize.

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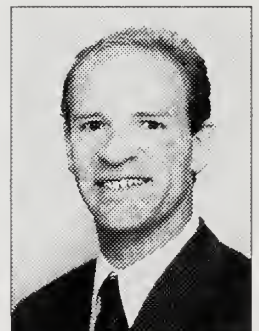
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Clinical Applications of Hypnotherapy In A Medical Setting

Eric P. Simon PhD, ABPP and Larry C. James PhD, ABPP

Abstract

Since 1958, hypnosis has been recognized by the American Medical Association as a legitimate form of medical treatment when administered by an appropriately trained practitioner. With the prevalence of certification societies and international organizations, the specialty has increased its level of professionalism and clinical applications. However, in spite of increased exposure and utilization of this unique clinical application, its use within medical settings varies considerably. The purpose of this article is to provide an understanding of clinical hypnosis and offer clinical applications, with the goal of increasing its exposure and utilization within medical settings.

The Western medical approach has traditionally been oriented towards differential diagnosis, leading to surgical procedures and/or pharmacological curative agents. In the new Mind-Body paradigm, we now understand that "alternative" treatments can bring about symptomatic relief that is often equivalent, if not superior to drug outcomes. One such approach is hypnosis. With hypnosis, one can evoke physiologic changes that were once thought beyond voluntary control. For example, subjects have shown "voluntary control" over sympathetic tone, vasoconstriction/vasodilation, heart rate, muscle tension, and so forth. Hypnosis is similar to biofeedback, in that physiologic change is brought under a patient's voluntary control. In biofeedback, however, a patient is taught how to do this using external feedback of their physiologic systems, whereas in hypnosis, control over these physiologic processes are evoked from within the person.

Hypnotherapy Defined

According to the American Psychological Association Division of Psychological Hypnosis, hypnosis can be seen as a procedure during which changes in sensations, perceptions, thoughts, feelings, or behavior are suggested.^{1,2} Kihlstrom³ offered a much more specific understanding of hypnosis, asserting that hypnosis is a set of procedures in which a person designated as the hypnotist suggests that another person (the patient or subject) experience various changes in sensation, perception, cognition, or control over motor

behavior. It has an induction phase and an application phase. Others have taken issue with the concept of a "trance state" and simply describe hypnosis as a heightened state of relaxation or a state of focused attention.⁴ Finally, investigators from the "Stanford hypnosis research lab" have elucidated the commonalties of hypnosis with dissociation, a mental separation of components of experience that would ordinarily be processed together.^{5,6}

A trance is associated with many physiologic changes to include: flattening of facial muscles, decrease in orienting movements, immobility, changes in blinking and swallowing, catalepsy in a limb, autonomous motor behavior, altered breathing and pulse, fixed gaze, faraway look, changed voice quality, time lag in response, literalism, perseveration in response, dissociation, relaxed muscles, amnesia, and time distortion.

During a hypnotic session, the patient is encouraged to focus on the hypnotherapist's voice, pleasant images and to fix his or her gaze in some particular manner. During this induction phase, the patient begins to enter a hypnotic trance, at which time the conscious mind becomes less and less vigilant to the immediate surroundings. When this conscious-unconscious mind dichotomy becomes more salient to the patient, the unconscious mind becomes more amenable to suggestions (which are congruent with the patient's belief system) for new possibilities from the hypnotherapist. The hypnotherapist serves as a guide, helping transport a patient from the normal awake state of consciousness to a state of hypnotic trance. Patients often describe trance as a pleasant, relaxed altered state of consciousness, and/or a type of reverie. This ability can be taught to the patient so that he or she can enter trance on his or her own and control distressing psycho-physiological symptoms.

Medical hypnosis, or hypnotherapy, is the clinical application of hypnosis to medical disorders/procedures. In 1955 the British Medical Association declared hypnosis as a legitimate form of medical treatment when applied by an appropriately trained practitioner, and in 1958 the American Medical Association gave their formal endorsement as well. Health care professionals from a variety of disciplines can be trained to administer hypnosis. Information about training opportunities can be obtained by contacting the American Society of Clinical Hypnosis (www.asch.net), the Milton H. Erickson Foundation (www.erickson-foundation.org), the Society for Clinical and Experimental Hypnosis (www.sunsite.utk.edu), or Division 30 (Psychological Hypnosis) of the American Psychological Association (www.apa.org/divisions/div30). Hypnotic treatment will commonly involve 1-4 treatments, at a typical cost of approximately \$125/session. The following discussion outlines some of the many possible clinical applications for medical hypnosis within a medical setting.

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Chronic Pain Applications

Chronic pain disorders (e.g., Complex Regional Pain Syndrome, Myofascial Pain Syndrome, Fibromyalgia, Chronic Pelvic Pain, Orchalgia, Failed Back Syndrome, etc.) have been shown to be very responsive to hypnotherapeutic treatment.^{7,8} One component of the treatment mechanism is that in a hypnotic state, patients are often induced into a deep state of physiologic relaxation. This acts to decrease Sympathetic Nervous System arousal in the same manner as sympatholytic medications (e.g., alpha-2 blockers) which are commonly prescribed for chronic pain symptoms. In spite of the data indicating the efficacy of hypnosis over and above relaxation strategies and simple placebo effects, some critics of hypnosis have mistakenly argued that a hypnotic trance is nothing more than a deeply relaxed state. While deep relaxation is a common component of hypnosis, hypnotic trance is not defined by limited to such a state. Research conducted at Stanford University⁹ has revealed that patients can remain in a trance state even during Sympathetic hyperarousal (for example, when patients are pedaling on stationary exercise machines). Further, it is well established that patients often respond to direct suggestions for pain control² independent of sympathetic or parasympathetic arousal.

Hypnotic anesthesia and analgesia are typically central aspects of hypnotherapy for pain control. Using hypnosis, patients can be given suggestions to reduce and often eliminate particular sensory experiences, to include pain, by helping patients reinterpret their sensory experience. This can be demonstrated with both acute pain (e.g., placing a subject's hand in a bucket of ice and water), chronic pain that is related mostly to psychological factors, and chronic pain secondary to a medical condition.

Applications For Hyperemesis Gravidarum & Nausea Associated With Chemotherapy

Hypnotherapy is an effective treatment to control hyperemesis and nausea during pregnancy^{10,11} as well as nausea associated with chemotherapy.¹¹ Patients can be provided with suggestions to relax their stomach and throat muscles causing their nausea, gagging, and vomiting to subside.

Applications In The Treatment of Motion Sickness

Hypnotherapy has been demonstrated as a successful treatment for motion sickness in an operational environment (in aircraft and submarines).¹² These authors highlighted the clinical utility of hypnotherapy in a military medical setting. In a military medical center the authors have successfully treated several patients suffering from exercise-induced nausea and vomiting with hypnotic suggestions designed to decrease muscle tension and nausea. In a similar manner, Jones and his colleagues¹³ yielded positive findings with Air Force pilots suffering from airsickness.

Psychosomatic/Stress Disorders

Hypnosis can be a powerful mechanism in teaching patients to gain control of psychophysiologic functions, in particular, by decreasing hyper-sympathetic arousal. As such, hypnosis is effective in the treatment of migraines¹⁴, tension headaches¹⁵, irritable bowel syndrome¹⁶, seasonal allergies¹⁷, asthma¹⁸, and a whole host of other stress-related disorders.

Dental Applications

A virtually ubiquitous problem treated both by dentists and chronic pain physicians is Temporomandibular disorder (TMD). Despite the typical treatment involving occlusional splint therapy, many patients brux through dental splints worn at night, as they clench and grind their teeth during sleep.

With this in mind, the first author has developed a group hypnotherapy TMD program at Tripler Army Medical Center. After an initial dental evaluation, patients referred for this treatment are given post hypnotic suggestions so that the tensing of the muscles around the Temporomandibular joint and any feelings of pain or discomfort in that area become cues for these muscles to immediately relax. This process of cued relaxation can occur at both a conscious and unconscious level. Thus far, the results have been very promising, with the average patient reporting 80% reduction in symptoms, without of course, side effects so common with most medications.¹⁹

The effectiveness of hypnotherapy in the treatment of temporomandibular disorders has been empirically demonstrated.²⁰ Further, Kent²¹ has provided an in depth overview of clinical applications in a variety of dental disorders. More specifically, Scott²² and Bills²³ offered data and information to suggest that hypnotherapy is effective with dental phobias.

Smoking Cessation

Our Behavioral Medicine Clinic commonly receives referrals for patients who would like to quit smoking cigarettes, but for various reasons, are seeking a treatment other than that offered by our formal cognitive-behavioral smoking cessation program, which entails using the nicotine patch or Bupropion combined with cognitive-behavioral strategies. The first author works with patients who, for example, seek hypnotherapeutic treatment to quit smoking, as they are well into pregnancy, and thus do not want to use a medication agent. These patients are given post-hypnotic suggestions for urge control, and for the induction of nausea immediately upon taking a puff, which immediately subsides at the moment of extinguishing the cigarette.

Many researchers, for example, Johnson and Karkut²⁴ have demonstrated the efficacy of hypnosis for smoking cessation. However, it has been suggested that hypnosis is effective for weight loss and smoking cessation in only approximately 25% of the cases, but for that 25% of people, a single-session treatment can produce complete long-term abstinence.²⁵ This low effectiveness is likely due to the challenges of any treatment for habit control.

Hypnotherapy For Weight Loss

As part of the LE³AN program (an inpatient plus outpatient healthy lifestyle service to assist patients with weight loss), we offer a segment on hypnosis to help patients gain control over their habitual eating responses to stress. James, Folen, Garland, et al.²⁶ have employed bi-weekly hypnosis sessions to help patients manage stress as it relates to maladaptive eating behaviors. Rigorous meta-analytic studies have indicated a significant effect of adding hypnosis to cognitive-behavioral treatments for weight reduction.²⁷

The Treatment of Phobias

Phobic individuals are typically more responsive to hypnotic treatment than less hypnotizable individuals.²⁸ These patients' phobic symptoms respond very well to hypnotic suggestions for symptom relief.²⁹ The first author successfully treated both a patient with a 50-year history of needle phobia, and a patient with a 30-year history of Gecko phobia by combining hypnosis with systematic desensitization and flooding techniques, respectively. Finally, Simon has recently documented the efficacy of novel hypnotic techniques for patients phobic of MRI equipment³⁰ and lumbar puncture procedures.³¹

Hypnotherapy for Uncomfortable Medical Procedures

Many patients, in particular pediatric patients, experience great distress from various medical procedures. Clinicians can work with parents, teaching them how to use hypnotic distraction techniques in helping their children through uncomfortable medical procedures such as lumbar punctures and bone marrow aspirations.³² These children typically report a great decrease in anxiety, accompanied by a greater internal sense of control over the experience.

Labor & Delivery

Hypnosis is naturally amenable to applications for pain control with labor and delivery. Pregnant women are taught how to use eye fixation, dissociation, trance deepening strategies, and relaxation, and are given post-hypnotic suggestions for anesthesia and analgesia (to include hypnotic reframing of the pain signals and the labor and delivery process) for the labor and birth process. Women trained in the use of hypnosis report significantly lower ratings of both pain and anxiety.³³

Coping With Trauma

Many professionals have used hypnosis for assisting patients to cope with a variety of traumas such as post traumatic stress disorder,³⁴ childhood trauma,³⁵ childhood sexual abuse,³⁶ rape,³⁷ and burns³⁸. It should be underscored here that cases involving psychological trauma are best handled with a consult to a psychologist or psychiatrist.

Applications For Surgery

Surgery can be seen as a very traumatic event for many patients. For this reason, hypnotherapy is often employed. A recent well controlled study demonstrated that as compared with surgical patients taught basic stress reducing strategies, surgical patients who were hypnotized reported significantly lower ratings of peri- and post-operative anxiety and pain, a significant reduction in intraoperative requirements for sedating agents, a significant reduction in nausea and vomiting, better surgical conditions, less signs of patient discomfort and pain, significantly more stable vital signs, a greater sense of intraoperative control, and higher satisfaction scores.³⁹

Limitations of Hypnosis

One of the major problems in the hypnosis/hypnotherapy community is that there is a discrete chasm between the clinicians and the more academically-oriented researchers.⁴⁰ Much of the research done by academicians is often not very clinically relevant, and much of the research conducted by clinicians is presented in the form of case studies, thus lacking the scientific rigor of well-controlled designs. There has been a call for greater integration between the two groups to produce well-constructed, clinically relevant research.⁴¹

Table 1. Clinical Applications of Medical Hypnosis (Hypnotherapy)	
Application	Recent Empirical Study Demonstrating Treatment Efficacy
Asthma	Kohen & Wynne (1997)
Burns	Patterson et al. (1996)
Dental Disorders	Dworkin (1997)
Hyperemesis from Chemotherapy	Genius (1995)
Hyperemesis Gravidarum	Torran (1994); Simon & Schwartz (1999)
Irritable Bowel Syndrome	Houghton et al. (1996)
Labor and Delivery	Mais (1995)
Migraines	Nolan et al. (1995)
Motion Sickness	James & Haasym (1993)
MRI examinations	Simon (1999)
Pain Management	Barber (1996)
Phobias	Smerville & Jupp (1992)
Post-Traumatic Stress Disorder	Spiegel (1996)
Seasonal Allergies	Madril et al. (1995)
Smoking Cessation	Johnson & Karhut (1994)
Surgical Procedures	Faymonville et al. (1997)
Tension Headaches	Ziman et al. (1992)
Uncomfortable Medical Procedures	Simon & Cannonito (in press) Rape & Bush (1994)
Weight Management	Kirsch (1996)

While generalizations cannot be made from any single case study, the trend from the many case studies conducted over the past few decades suggest that hypnosis is an effective form of treatment for a variety of medical disorders. Further, meta-analytic studies provide more rigorous evidence of the efficacy of hypnotherapeutic treatment.⁴² Hypnotherapy, by no means, should be thought of as a panacea. While there has been supportive evidence for its effectiveness in treating many of the disorders discussed in this article, the efficacy of hypnotherapy has not been convincingly demonstrated for a variety of other disorders, for example, ADHD⁴³ and alcohol/substance abuse.⁴⁴

There is also some research that would suggest that a patient's level of hypnotizability plays an important role in determining outcome of therapeutic success,⁴⁵ although other studies indicate that this is often not the case.⁴⁶ This issue is of critical clinical importance, and future research should seek greater clarification. Another issue of significant clinical importance is that many patients fear undergoing hypnotic treatment because of the frightful distortions and fallacies they have witness on television, in the movies, or with stage hypnosis. It is our experience that hypnotherapy will fail if the myths and misconceptions of hypnosis are not discussed and dispelled prior to initiating treatment.

Discussion

The applications of hypnosis are varied and it would seem that hypnotherapy is a valuable adjunctive treatment option for many physicians to consider. The authors have worked collaboratively with physician providers over the past five years and have had considerable success using hypnotherapy interventions. Once their anxieties about hypnosis are alleviated, patients typically welcome a procedure that does not involve medication, is non-invasive, reduces physical pain (rather than causes more pain), and offers a mechanism to autonomously control pain or discomfort. Thus, it is the hope of the authors that the examples and information provided in this paper spark interest to expand the applications of medical hypnosis in medical settings.

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POTPOURRI I

Mrs. B came for her first visit at term, in labor, with a well-buried cerclage. We managed a healthy girl and she told us this story. She'd flown to Vancouver with a history of recurrent 2nd trimester abortions.

Her GP Dr. Brown had referred her to Dr. Jones, a gynecologist. Dr. Jones, after a physical and history told her "You have an incompetent os." "Dr. Jones, she interrupted, "I found Dr. Brown to be very professional and quite competent. And he was kind enough to refer me to you, so why are you calling him names?"

Oruvie Uptigrave MD

CLOSE CALL...

A patient I'd previously delivered was pregnant again and saw her family doctor who ordered an ultrasound and sent me a copy of the report...

The baby was fine and the bladder normal, but the kidneys weren't properly visualized. So I noted at the bottom of the report, "Suggest you repeat the ultrasound in 2 weeks (for CYA reasons)

His secretary called to inquire what CYA meant. With great difficulty, she pried "Cover Your Ass" out of my secretary... Twenty minutes later, the patient called and wanted to know the meaning of CYA.

I was too embarrassed to speak to the patient, so I asked my secretary to tell her not to worry—that it was too early for the ultrasound and it would be repeated in one or two weeks...

The patient was not satisfied and the exasperated secretary put her on hold and begged me to handle the situation.

The lights came on in my head... My secretary repeated my explanation viz "The ultrasound Cannot Yet Assess the kidneys" The patient was satisfied and hung up.

Michael Silver MD

CONFERENCE NOTES:

"New Data in the Management of Diabetic Peripheral Neuropathy and Post herpetic Neuralgia" VP Elyse Winger, MD, Assoc. Prof. Neurology, UCLA School of Medicine. Fri. Oct. 10 QMC Kam Auditorium...

A. Neuropathic pain: Post herpetic and diabetic neuropathy...

Description: 1/2 to 1% of adult population have neuropathic pain described as "burning", electric shock, shooting, like ant crawling, paresthesias, paroxysms etc... Puzzling with minimal physical evidence e.g. trigeminal neuralgia, phantom limb pain etc. EMG may be normal

Two types of pain viz nociceptive vs. neuropathic (e.g. post herpetic; diabetic neuropathy; reflex sympathetic dystrophy; radicular pain without skin lesions esp. in chemotherapy patients...

Neuroanatomy of Pain Pathways:

- A Delta and C Fibers
- Spinothalamic tracts
- Spino-radicular tract: "Pain is 'Ying' and 'Yang' kind of thing."

Neurotransmitters:

- Serotonin
- GABA
- Glutamate
- Substance P
- Opioid Peptides

***Drugs as treatment beefs up existing pathways...

—Mechanism of neuropathic Pain:

↓ firing = Cl^- ; ↑ firing = Na^+ , K^+

B. Tricyclic Therapy: a. Amitriptyline:

↓ serotonin uptake; ↓ norepinephrine reuptake — *Analgesic effect are independent of anti-depressant properties...

C. Anticonvulsants: ↓ pain and ↓ epilepsy;

Ca^{++} , Na^+ , K^+ ions flow in; Cl^- flow out...

- Phenytoin: Not a powerful analgesic; less Na^+ ingress; used in trigeminal neuralgia
- Valprate: Used in migraine and ties; blocks Na channel; ↑ GABA activity
- Lomotrigine: Na channel; GABA mediates
- Toprimate:
- GABAPENTIN: Used in diabetic neuropathy; postherpetic neuropathy; Bipolar disorder trial: ↑ GABA; ↓ Na^+

GABAPENTIN Trial (8 wks) Dose 2400 mg/d to 3600 mg/d for diabetic neuropathy & post herpetic neuralgia

Prior epilepsy: 1800 mg/d; start 300 mg/d → tid → qid

Study results: ↓ pain within 2 weeks

Side effects: Dizziness, Peripheral edema, Infection, Ataxia, Pain, convulsions

Research Studies for intractable Pain:

- Capsacin (Hot Pepper)
Used long enough: ↓ substance p; ↓ glutamate
- Localized pain & arthralgia: Use lidocaine gel for 3d...

POTPOURRI II

A government worker found an old brass lamp in a filing cabinet. When he dusted it off, a genie appeared and granted him 3 wishes. "I'd love an ice cold beer right now!" he told the genie. Poof! A beer appeared.

Next the man said, "I wish to be on an island surrounded by beautiful and willing women." Poof! He was on an island with gorgeous women fawning all over him.

"Oh man, this is the life, the guy thought, "I wish I never had to work again." and poof! He was back at his desk in his government office.

The doctor tells his patient, "I have some good news and some bad news."

"What's the good news, Doc?"

The doctor says, "They're going to name a disease after you."

Three psychiatrists were taking a walk... "People are always coming to us with their guilts and fears," one says, "but we have no one to go to with our own problems."

"Since we are all professionals," another suggests "why don't we hear each other out right now?" They agree that is a good idea.

The first psychiatrist confessed, "I'm a compulsive shopper and deeply in debt. So I over bill our patients as often as I can."

The second admits, "I have a drug problem that's out of control and I frequently pressure my patients into buying illegal drugs for me."

The third psychiatrist says, "I know it's wrong, but no matter how hard I try, I can't keep a secret."

Reader's Digest Oct 99

CONFERENCE NOTES:

"Allergy for the Primary Care Physician" VP Theodore Chu, MD, Clinical Assistant Professor of Medicine, Stanford... QMC Fri AM Conference, Nov 5, 99

A. Clinical Management of Anaphylaxis:

Sequence — Fatal Anaphylaxis: 10": Itchy mouth, tight throat; 90": Abdominal pain; 120": enuresis; 125": wheezing SOB; 130": respiratory arrest; 135": resuscitated by CRP; 165": electroconvulsive Rx; 180": declared dead

**Epinephrine must be given within 3" of a food induced anaphylaxis...

Steroids do not reverse

B. Dx of Anaphylaxis: a. Acute hypotension, b. Cardiovascular collapse, c. Bronchial obstruction, d. Allergic Sy's, e. Recent exposure to agents, f. ↑ mast cell tryptase

C. Rx Anaphylaxis: Epinephrine (drug of choice) subcutaneously (0.3-0.5 ml of 1:1000 dilution q10-20 min) Watch for biphasic anaphylaxis. Caution: avoid bolus of epinephrine For upper respiratory obstruction, besides epinephrine, give O_2 ; extend neck, give antihistamines and insert oropharyngeal airway.

D. Prevention of Anaphylaxis: a. Immunize against stinging insect venom in persons allergic; b. persons with hx of allergy, asthma, cardiac disease or on beta blockers are more likely to have anaphylaxis from IV radiocontrast media and should be premedicated with diphenhydramine 50 mg IM one hour before procedure, prednisone 50 mg orally 13, 7, and 1 hour before the procedure, c. Patients at risk for anaphylaxis should be prescribed adrenalin for self administration (Epi-Pen or ANA-kid)

Pharmacologic Treatment of Systemic Anaphylaxis in Adults.*

Agents	Indications	Dosages	Goals	Complications
Initial Therapy				
Epinephrine ⁹	Bronchospasm, laryngeal edema, urticaria, angioedema	0.3-0.5 ml of 1:1000 dilution (0.3-0.5 mg) subcutan. fluid q 10-20 min	Maintain airway patency, reduce extravagation and pruritus	Arrhythmias, ¹⁰ hypertension, tremor
Oxygen	Hypoxemia	40-100%	Maintain pO ₂ ≥ 60 mm Hg	None
Albuterol	Bronchospasm	0.5 ml of .5% soln in 2.5 ml saline	Maintain airway patency	Same as for epinephrine
Secondary therapy				
Aminophylline	Bronchospasm	Loading dose: (6 mg/kg IV over 30 min; then maintain 0.3-0.9 mg/kg/hr IV	Maintain airway patency	Arrhythmias, nausea, vomiting, seizures
Corticosteroids	Antiallergic	250 mg hydrocortisone or 50 mg methylprednisolone IV q6h for 2-4 doses	Block or reduce prolonged or late-phase reactions	Hyperglycemia, fluid retention
Antihistamines (H ₂ blocker use controversial)	Urticaria	25-50 mg hydroxyzine or diphenhydramine IM or PO q 6-8 h prn 300 mg of cimetidine slowly IV or po q6h	Reduce pruritus, antagonize H ₁ effects of histamine Antagonize H ₂ effects of histamine	Drowsiness, use dry mouth, urinary retention
Cardiovascular reactions				
Initial therapy				
Trendelenburg position	Hypotension	--	Maintain sys. BP ≥80-100 mm Hg	None
Intravenous fluids (saline, colloid e.g. 5% albumin)	Hypotension	1 liter q 20-30 min prn, titrate	Maintain sys. BP ≥80-100 mm Hg	Congestive heart failure, pulmonary edema
Epinephrine 500 ml of D5W	Hypotension	1 ml of 1:1000 dilution in nervousness IV at 2 µg (1 ml) /min; titrate	Maintain sys. BP ≥80-100 mm Hg	Arrhythmias, hypertension, tremor
Secondary therapy				
Norepinephrine	Hypotension	4 mg in 1 liter of D5W IV at 8 µg (2 ml)/min same as above	Maintain sys. BP ≥80-100 mm Hg	Same as for epinephrine
Antihistamines (H ₂ blocker use controversial)	Hypotension		Antagonize H ₁ and H ₂ effects of histamine on myocardium and periph. vasc.	Drowsiness, dry mouth, urinary retention
Atropine	Refractory hypotension, tachycardia	0.3-0.5 mg IV q5-10 min up to 2mg	Antagonize cholinergic effects	Drowsiness, dry mouth, urinary retention
Glucagon (use controversial)	Refractory hypotension esp. in persons on β-blockers	1 mg in 1 L D%W IV 5-15µg (5-15 ml)/min	Increase heart rate and cardiac output	Nausea

*Adapted from Bochner and Sim refs. Dosages, choice of agents, efficacy and safety must be individualized. Lower doses of aminophylline for older patients, those taking meds that reduce metabolism, those with hepatic dysfunction and congestive heart failure.

POTPOURRI III

A young Chinese couple, having made love one evening were lying in comfortable relaxation and the young man said, "What I would like now is some sixty nine"...

Whereupon the young wife said, "Are you crazy? Do you want me to get out of bed, get dressed and make you broccoli and rice?"

Asimov

Mr. Ginsberg, age 83, went to the doctor for a complete physical. About halfway through, the doctor was called to the phone.

He said, "Mr. Ginsberg, this will take no more than a few minutes. Here's a jar. Go to the bathroom and place a semen sample in it for examination.

A minute later, the doctor, returned and there stood Mr. G with an empty jar.

"Doctor," said Mr. G "I did my best. I tried with my right hand, I tried with my left hand, I even tried with both hands, but nothing happened."

The doctor said soothingly, "Now Mr. G...don't be embarrassed...It is quite common to be impotent."

Whereupon Mr. G with towering indignation, "What do you mean impotent? I couldn't open the jar."

Asimov Laughs Again

A few months ago, a large man about 40 came to my office. The symptoms that finally drove him there was an intolerable thirst. Additional questioning revealed that for several months he'd experienced polyuria and had lost 40 of his 300 lbs. A few days later when the blood sugar was controlled and he was launched on an educational program, I told him I was puzzled why he did not seek medical help sooner. "Well, Doctor, I figured that with all that peeing, I must have prostate trouble. I knew what you guys do to check for that."

*Jane Parnay, Calgary
Stitches...*

I prescribed some medication to a sweet, sometimes confused elderly patient and reviewed the instructions: "Take two pills every six hours."

"Are there any side effects?" she asked.

"Drowsiness, but that occurs at higher doses."

Next day, she called me in a panic. "Doctor, I ran out of pills.

"How can that be? The prescription was for seven days. Did you take them as I told you?"

"Oh, yes, Doctor. Exactly like you said, 'Six pills every two hours!'"

"No," I explained, "I said, 'two pills every 6 hours' How are you feeling?"

"Actually very good, Doctor. Last night I had my best sleep in years. I think you cured my insomnia."

David Thow MD, Toronto

Not Exactly

One of my patients, quite a boisterous and colorful character had chest discomfort and SOB. Since he was a heavy smoker, I sent him for pulmonary tests and EKG.

He was at the Outpatient Dept. for his pulmonary function test. He returned a few days later for an EKG.

While sitting in the waiting area, he saw the female tech who'd done his pulmonary function test - He sang out, "How are ya today?"

The lady was surprised and asked him where they had met before. He responded loudly: "You must remember me - You gave me one of those blow jobbie things a few days ago."

The entire waiting room exploded in hysteria.

Wanda Whitty MD

From Stitches

Medical Tid Bits I

Heart Drugs Go Begging: A panel of 150 experts concluded that many congestive heart failure patients are not getting the best possible treatment. The experts recommend a regimen that includes digitalis and diuretics as well as two other key drugs, ACE inhibitors and beta-blockers, which are now underprescribed...

High Fiber: A study of 89,000 women published in the NEJM in Jan has found that high fiber diet makes no difference in developing colon cancer. A similar study of men in 1997 arrived at a similar conclusion. Current evidence suggests taking a multivitamin with 400 micrograms of folic acid, don't smoke, avoid red meat more than five times a week and plenty of exercise may prevent colon cancer...

Time Feb 1

Diet Pill: Effective. If Messy: Obese dieters taking Orlistat lost more weight (19 lbs) in the first year than dieters on placebo (13 lbs). Side effects include cramps and "fecal incontinence."

Muscle Candy: Mark McGwire took both androstenedione and creatine last year and cranked out 70 home runs and Sammy Sosa took creatine and came in second. JAMA in June published a double-blind placebo controlled trial of 20 men and found that taking "andro" did nothing for testosterone levels. Instead, it boosted estrogen-like compounds and decreased levels of HDL by 12%. Moreover "andro" did not help build muscle mass at all. Creatine is not a steroid and more closely resembles a protein. It improves performance by 2% or 3% in repetitive exercises that require short bouts of explosive energy according to a panel of experts convened by the American College of Sports Medicine...

Time Jun 14

Medical Tid Bits II

Standing Tall... Synthetic growth hormones help short, healthy kids achieve new heights - sometimes. The first major study to follow such youngsters through adulthood concludes that on average, 50% of patients who received the daily injections grew 2 inches taller than expected. Doctors, however, cannot predict which children will respond... Cost: up to \$20,000/year...

Posture Imperfect... Women athletes may be more vulnerable than men to knee injuries because they crouch less when playing sports like basketball and soccer... the upright posture, during landing and pivoting forces the quadriceps to exert pressure on knee ligaments...

Time Mar 1

Stroke Specialists... Enter an experimental drug called recombinant pro-urokinase. In a clinical trial of 180 patients presented at a meeting of the American Heart Association in Feb, researchers reported that 40% of patients who received the drug within six hours of the start of their stroke made a dramatic recovery. Dr. Anthony Furlan, a stroke specialist at the Cleveland Clinic who led the study, says the recovered patients "could return to work, take care of their finances, drive a car." The drug works well because the doctors inject it via a catheter threaded directly into the site of the clot through the middle cerebral artery.

Fight Infection and Help the Heart... A preliminary report suggests that taking certain antibiotics (Tetracycline and Ciprofloxacin) may reduce the risk of heart attack. The finding lends credence to a tantalizing new theory that infections may contribute to heart disease by causing inflammation of arterial walls...

Medical Tidbits III

Revved Up Rx's: A new report suggests that recommended doses for many medications may be too high... among them Prozac and Lipitor. Cutting down the dose sometimes by 1/2 or more may reduce adverse reactions without sacrificing the drug's effects...

Racial Gap: Lung Cancer kills 160,000 Americans each year, esp black men (34% black men smoke compared to 28% of white men)

Researchers at the Memorial Sloan Kettering Cancer Center and the National Cancer Institute in Bethesda Md looked at data from 10,000 white and black medicare patients with lung tumors early enough to do surgery-77% of the white patients had surgery while 64% of the blacks had. The year survival rate for black patients was 26% compared to 34% for the whites.

Currently there is no screening test for early lung cancer, but Dr. Claudia Henschke at the Weill Medical College at Cornell and her colleagues feel that low dose CAT scans can identify very small tumors. Still the experimental scan costs \$300 and is so far available only in New York City; Rochester Minn and Tampa Florida...

Medical Tid Bits IV

Block That Cold! A top cold researcher, Jack Gwaltney from Virginia School of Medicine advises:

- 1). Wash your hands a lot with soap and water. (Cold viruses like to linger there)
- 2). Don't put your fingers in your eyes or nose as they give easy access to nasal passages...
- 3). Take over-the-counter antihistamine like chlorpheniramine or clemestine (drowsy formulas work better against colds than the non drowsy formulas) and an anti-inflammatory like ibuprofen or naproxen.

New Treatment for Baldness? Researchers removed patches of a man's scalp (hair, roots and follicles) and transplanted them onto the forearm of an unrelated woman. The patches took root and after more than two months showed no signs of rejection...

Time Nov 15

When You're Older: A study of 300 women (ages 21 to 84) found that sensitivity to the bitterness of such vegetables as broccoli and spinach wanes with age. The older women preferred sour fruits such as grapefruit and lemons and bitter beverages as coffee and tea...

Gene Blues: The Washington Post reported that half a dozen heart patients have died while undergoing gene therapy.

Gene therapy shows great promise, but anyone considering gene therapy should know it's still very experimental...

POTPOURRI IV Disorder in Court:

Q: What is your date of birth?

A: July 15th...

Q: What year?

A: Every year...

Q: What gear were you in at the moment of impact?

A: Gucci sweater and Reebokes.

Q: This myasthenia gravis— does it affect your memory?

A: Yes

Q: And in what way does it affect your memory?

A: I forget

Q: You forget? Can you give me an example?

Q: How old is your son—the one living with you?

A: 38 or 35. I can't remember which...

Q: How long has he lived with you?

A: 45 years

Q: What was the first thing your husband said to you when he woke in the morning?

A: He said, "Where am I, Cathy?"

Q: Why did that upset you?

A: My name is Susan.

Q: Sir, what is your IQ?

A: Well, I can see pretty well, I think

Recently reported in the Massachusetts Bar Association congress (Submitted by Sherry Hagino)

POTPOURRI V

Mary was on her death bed with her husband Sam at her side. He held her cold hands with tears steaming down his face...

"Sam," she said weakly..."Hush, dear."

"Sam," she whispered, "I have something to confess."

"There's nothing to confess," Sam soothed. "It's all right. Everything is all right."

"No, no, I can't die in peace," Mary insisted. "I must die in peace."

"I must confess Sam, that I have been unfaithful."

Sam stroked her head, "Now, Mary don't be concerned. I know all about it."

"You do?" she gasped.

"Of course dear, why else would I have poisoned you."

Play Boy

Classified Notices

To place a classified notice:

HMA members.—Please send a signed and typewritten ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in HMJ as space is available.

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Compiled by Carolyn S.H. Ching and Judith A. Kearney of the Hawaii Medical Library

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One Thing Leads To Another—But Does It Have To?

Reacting to the scare of the highly contagious Creutzfeldt-Jacobs (mad cow) disease, Britain's health boss ordered opticians to dispose of all trial contact lenses after each use. The Association of Optometrists expressed concern that the government gave no advance warning to practitioners, and the order caused considerable alarm among contact lens wearers. There is zero evidence that any mad cow disease deaths have been the result of contact lenses, and the order was characterized as simply a precautionary measure. Sounds like the stampede of the mad Health Secretary.

Tough As It Is, When Americans Roll Up Their Sleeves, They Still Manage To Ignore This Problem.

Whether it is prosperity, our electronic world, changes in occupational physical demands, eating habits, or simple indolence, a very serious underlying disorder with the health of too many people is excess weight, pork, obesity, fatness – the all-American accepted illness. The present White House occupant is at least 10 lbs. overweight. Unfortunately, too often the problem involves the physician as well. National data show that one-third to one-half of adults are overweight, and one-fourth are clinically obese. Accompanying diseases are high blood pressure, type 2 diabetes, sleep apnea, some cancers and cardiovascular disease. Along with these measurable conditions are social stigmatization and accompanying psychological distress with depression and plunging self-esteem. It is not just an adult problem; the American Academy of Pediatrics committee on nutrition has established that obesity is the number one problem in child health. 14% of children and 12% of adolescents are overweight with the attendant possibility for some chronic diseases later in life. Forget the counseling and ignore the diet books. The solution is hard but not complicated. It takes a dedicated change in life style to make exercise a priority, and use that most difficult of exercises, the push-away (from the table).

If It Ain't Broke Use It Again.

Hospitals don't want to talk about it, but the squeeze on reimbursements for medical services has caused the reuse of medical instruments. A 1999 survey of 132 hospitals revealed that almost half routinely reuse medical devices labeled for single use. Manufacturers fear liability for the misuse of their products, but also often label products single use not for safety but because they want to sell more. In January, a piece of reused catheter broke off in a woman's heart, and the doctors were unable to remove it. The hospital officials stated that the woman is in no pain or danger. A Mayo Clinic Administrator stated that the Mayo Clinic reuses special catheters to map heart problems five or six times "without any evidence of infection." The question is legal dynamite, because drug companies and hospitals are seen as deep pockets. A good plaintiff's attorney will see a big company name in a case involving a reused device, and the door is open. Juries are eager to punish what would be perceived as a cost saving mechanism with patients at increased risk.

Don't Feed Me Any More Cheese. I Just Want Out Of The Trap.

The Health Care Financing Administration claims that reductions in Medicare payments do not truly impact patient practices. The financial problems of so many practices around the country belie that bureaucratic assumption. The American Medical Association's Socio-economic Monitoring System (SMS) survey established some shocking statistics: (1) 31% of physicians have cut staff, salary increases and staff benefits (2) 36% have cut their own salaries and benefits (3) 61% said that Medicare cuts were a major influence on plans for early retirement (4) 69% said Medicare cuts led them to increase productivity by spending less time with patients and referring out complicated cases. Additional alterations in medical practice involved not renewing or updating office equipment, moving to a new (cheaper) location, reducing or refusing telephone consultations and counseling. Is it any wonder that organized medicine delves into previously unthinkable areas such as a medical union?

If You Can't Find Something Everyone Agrees On, It's Wrong.

The American Osteopathic Association House of Delegates has not followed the direction of the AMA. Delegates decided that unionization is not the answer to the problems of managed care. The AOA is supporting legislative

attempts to provide an antitrust exemption so that physicians can collectively negotiate with managed care organizations. The Executive Director of the AOA stated that their House of Delegates believes they can "work together with managed care organizations to create an open and constructive dialogue to benefit patients and improve the practice environment for osteopathic physicians."

Let's Really Save Medicare Dollars And Clean Out Those Nursing Homes.

"Euthanasia could become the health care industry's ultimate cost-control strategy in dealing with patients thought to have little chance of survival," J.C. Pickett, MD, President, California Medical Association. Despite opposition of the bill from the CMA and representatives of the disabled and hospice organizations, the Judiciary Committee of the California state assembly has approved a proposal to legalize physician-assisted suicide, following in the steps of Oregon. At least the committee didn't approve reimbursement for death-dealing physicians as was done by their neighbor to the north. The medical association wants to alleviate end-of-life suffering by improving access to hospice care, providing counseling and pain-management services.

Governments Are More Likely To Collapse By A Deficit Than to Perish By The Sword.

That Medicare reform is vital should be obvious. With the birth of Medicare in 1965 there were six workers for every Medicare recipient, but today that ratio is three to one. The burgeoning size of the Medicare population is frightening, and the increased longevity coupled with sophisticated medical care is pushing program costs to constantly higher levels. President Clinton has proposed to add prescription drugs as a benefit to the existing program, a worthy thought, but Medicare does not need a new entitlement added to a poorly crafted funding system. The proposal appears modest today, but the drug benefit will surely balloon. The plan has been compared to building a swimming pool atop a rickety building. What Congress and the President should carefully consider is the Breaux-Thomas plan from the President's Bipartisan Commission on the Future of Medicare. The proposed reforms are modeled on the plan serving members of Congress and federal employees.

The Pain In Spain Is Plainly From The Gain (numerical)

Multiple problems exist in the health care system of the United States, including the financial crash of many management companies, the need to curb HMO abuse of patients and physicians, the squeeze on reimbursements by Medicare and other third parties, and an abiding litigious population spurred by an army of personal injury attorneys. However, consider Europe where many young trained physicians are unemployed. According to a recent JAMA article, in Spain 22% of physicians are unemployed, and many of these are highly trained professionals who passed a rigorous examination and then spent up to 5 years in residency. It's really a question of numbers with more medical schools and graduates than necessary for Spain's population, and that is where America's medical system appears headed also.

The Young Doctor Has 20 Drugs For Each Disease; The Old Doctor Has One Drug For 20 Diseases.

When California Attorney General Bill Lockyer told Attorney General Janet Reno and drug czar Barry McCaffrey that he has the authority to conduct marijuana research under California law, he was told he would be vulnerable to arrest and prosecution for violating federal law. Lockyer had convened a state-wide task force to study ways to implement the state's medical marijuana law, and hoped for federal support for the idea. No way is the Clinton administration going to surrender to "reefer madness" at this time. Instead, go ahead and write a prescription for an innocent drug like morphine.

ADDENDA

- ❖ Literally translated, the word carnival means "flesh farewell."
- ❖ About 50% of U.S. workers say they have had sex in the workplace. Favorite place - the boss's desk.
- ❖ Duke Ellington once greeted Richard Nixon, and said he kissed the President four times, one for each cheek.
- ❖ Such is the human race, it often seems a pity that Noah did not miss the boat.
- Aloha and keep the faith —rts■



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